

# AUTHOR INDEX

- A  
Aasa, R., 152  
Abad, M. S., 443  
Abbott, M. S., 287, 288, 693  
Abdel-Mawgood, L., 299  
Abe, H., 359  
Abernathy, R. H., 608, 609  
Abou-Mandour, A. A., 70  
Ackerson, R. C., 110  
Adam, J. S., 60  
Adams, T. R., 214  
Adams, W. W. III, 332, 335  
Adamse, P., 446, 450, 451  
Agata, K., 485  
Agel, G., 317  
Ahdoot, D., 426  
Ahluquist, P., 212  
Ahmadian, V., 557, 558, 570  
Ahmed, A. E., 677, 681, 688  
Ahokas, H., 220  
Ahrens, M. J., 683, 690  
Ai, Y., 402  
Ainsworth, D. C., 555  
Aist, J. R., 234  
Aitken, J. R., 483  
Akazawa, T., 23, 30, 33, 138, 140  
Aken, F. V., 470, 474  
Akeson, A., 145, 149  
Akoyunoglou, A., 445  
Akoyunoglou, G., 444, 445  
Albergoni, F. G., 111  
Albersheim, P., 652, 653, 655-59, 661, 664, 677, 678  
Albert, F., 667  
Alberte, R. S., 441  
Albertini, L., 400  
Albon, N., 80, 93  
Aldridge, D. C., 174  
Alexander, D. C., 631, 683, 689  
Alexander, L. J., 248  
Alfonzo, R., 287  
Al-Hakim, M., 152, 164  
Ali, Z. M., 683-85, 690  
Alivisatos, S. G. A., 354  
Allakhverdiev, S. I., 336, 338  
Allan, D. L., 104, 106  
Allaway, W. G., 115  
Allen, J. C., 152, 164  
Allen, J. F., 287, 293-95, 297, 299, 334  
Allred, D. R., 444  
Allsopp, T., 560  
Alm, D. M., 582  
Al-Mallah, M. K., 374  
Almeida, J., 243, 263, 265, 639, 640, 643  
Aloni, B., 110, 111, 116  
Aloni, R., 545  
Alonso, E., 435, 436  
Alpert, D., 691  
Altmann, A., 220  
Altschuler, M., 148, 150, 156-58, 165, 170, 174, 394, 402, 412, 607  
Altschuler, Y., 25  
Alwen, A., 219  
Ambros, V., 243  
Amsz, J., 323, 324  
Amir-Shapira, D., 581, 582, 589  
Amzel, L. M., 166, 179  
Andersen, R. A., 169, 171  
Anderson, A. J., 667, 668  
Anderson, A. T., 655  
Anderson, J. D., 658, 659, 690  
Anderson, J. M., 174, 179, 287, 292, 294, 297, 324, 328, 429, 652  
Anderson, J. O., 168  
Anderson, J. W., 137  
Anderson, M. A., 23, 190, 198, 394, 399, 401, 402, 412, 626, 634, 642  
Anderson, M. P., 383, 514, 515, 520  
Anderson, R. G. W., 36, 490  
Anderson, S., 469, 477, 486, 488  
Andersson, B., 292-95, 297, 328, 334, 336  
Andre, E., 145  
Andre, J. C., 153  
Andreae, M., 30  
Andrews, J., 488  
Andrews, P. C., 158, 162, 164  
Andrianarison, R.-H., 147  
Ang, D., 583, 589, 590  
Angermuller, S., 612  
Anglesea, D., 559, 566  
Anstis, P. J. P., 170  
Antoun, H., 382, 383  
APEL, K., 227-40; 227, 229, 233, 234, 425, 426, 428, 430, 434, 438, 441, 444  
Apfelbock, A., 429  
Apley, E. C., 135  
Apostol, I., 667  
Appelqvist, L.-A., 492  
Appels, R., 400, 632  
Appleby, A. P., 111  
Appleby, C. A., 374, 378, 380, 508, 514, 519, 520  
Appleby, R. S., 469  
Apuya, N., 593, 608, 609  
Arber, A., 267, 268, 273, 274  
Archbold, H. K., 78, 84, 86  
Argos, P., 30  
Argyroudi, A.-A., 363, 364  
Argyroudi-Akoyunoglou, J., 444, 445  
Arimoto, Y., 213  
Armitage, P., 210  
Armstrong, C., 214  
Arntz, B., 336  
Arntzen, C. J., 287, 292-95, 298, 442  
Aro, E., 328  
Arondel, V., 483, 484  
Arrigo, A.-P., 602, 603  
Arwas, R., 384  
Asahi, T., 44  
Asay, K. H., 78  
Ascaso, C., 567, 568, 572  
Aschoff, J., 352  
Ashbaugh, M., 433, 451  
Ashford, A. E., 115  
Ashford, D., 37  
Ashton, A. R., 300  
Ashton, C., 299  
Asselin, A., 654, 655  
Astier, C., 299  
Atkey, P. T., 689, 690  
Atkins, C. A., 378, 512, 514  
Atkinson, A., 23, 394, 401, 402, 412  
Atkinson, B. G., 580, 593, 594, 596, 602, 608  
Atkinson, C. J., 66  
Atkinson, Y. E., 432  
Audran, J. C., 400  
Austin, A., 470, 473  
Ausubel, F., 451  
Ausubel, F. M., 512, 518, 541, 695  
Avants, J. K., 682, 686  
Averyhart-Fullard, V., 518  
Avigad, G., 78  
Avigliano, L., 166  
Avissar, P., 428, 434  
Awad, M., 688  
Awasthi, D. K., 244, 268  
Axelrod, B., 146-52, 154, 156, 158, 162, 164-66, 179, 232  
Ayers, A. R., 652  
Ayles, N. M., 691  
Azumi, Y., 425

## B

- Babbitt, J. K., 688  
 Bacic, A., 394, 677, 679  
 Bacon, J. S. D., 80, 93  
 Badger, M. R., 108, 114  
 Baerson, S., 426, 434  
 Bafor, M., 497  
 Bai, D. H., 472  
 Baier, M., 63, 64, 69  
 Bailey, D., 292  
 Bailey, F., 103  
 Baker, B., 540, 695  
 Baker, D. A., 63  
 Baker, M. E., 517  
 Baker, N. R., 329, 330, 333, 338  
 Bakhuizen, R., 510, 511  
 Bakker, J. A., 451  
 Bakr, S., 287-90  
 Balasingham, N., 494, 495  
 Balazs, E., 693  
 Balcarek, J. M., 158, 161  
 Baldwin, E. A., 653, 654, 662, 663, 690  
 Baldwin, J. K., 167  
 Ball, E., 106, 257  
 Ball, J. T., 339, 341, 342  
 Ballard, R. A., 84  
 Balls, A. K., 228  
 Balshusmann, D., 31, 536, 543  
 Balusek, K., 36  
 Bambridge, H. E., 470, 472  
 Bancal, P., 80  
 Bandurski, R. S., 543  
 Bandziulis, R. J., 438  
 Bankaitis, V. A., 39, 40, 483  
 Banta, L. M., 39-41  
 Barbara, D. J., 695  
 Barbato, R., 285  
 Barber, D. A., 115  
 Barber, D. J., 137  
 Barber, J., 292-95, 297-99, 315, 322, 323, 328  
 Barber, M. S., 654  
 Barbier-Brygoo, H., 538  
 Bardwell, J. C. A., 583, 584, 587  
 Barényi, B., 336  
 Barker, D. G., 510, 512, 517, 518, 520  
 Barker, R. F., 43, 359  
 Barkholt, V., 227, 229, 234  
 Barkworth, M. E., 78  
 Barlow, B., 402, 405  
 Barlow, P. W., 60  
 Barman, R., 689  
 Barnabds, B., 194, 195  
 Barnes, D. K., 375  
 Barnes, M. F., 688  
 Barnes, G., 175  
 Burnett, L., 427, 433  
 Barnson, A., 691  
 Barnum, S. R., 473  
 Baron, M., 572  
 Baron-Epel, O., 107  
 Barraclough, R., 442, 590, 592  
 Barrier-Brygoo, H., 110  
 Bar-Shira, E., 177, 178  
 Barthe, J. P., 657, 660  
 Bartlett, S., 302, 443  
 Bartlett, S. G., 444  
 Bartley, I. M., 120, 676, 677, 681, 682  
 Barts, P. W. J. A., 109  
 Bashe, D. M., 401, 626, 629, 630  
 Bassam, B. J., 521  
 Bassarab, S., 517  
 Bassett, M. E., 114-16  
 Bassi, R., 285  
 Bassünier, R., 27  
 Bateman, A. J., 409  
 Bateman, R. M., 271  
 Bates, L. M., 57  
 Bateson, A., 268, 271  
 Bateson, W., 242, 268, 271  
 Bathgate, B., 689  
 Bathurst, N. O., 380, 384  
 Batschauer, A., 234, 425, 426, 428, 430, 434, 438  
 Battey, J. F., 473, 628  
 Battey, N. H., 261  
 Bauer, W. D., 508, 510, 511, 677, 678  
 Bauerle, C., 302, 440  
 Baumann, G., 593, 594, 596, 598, 612  
 Baur, E., 242, 256, 271  
 Baur, M., 213  
 Bautor, J., 201  
 Bauw, G., 24, 31, 44, 66, 536, 543  
 Baydoun, E. A.-H., 104, 120, 654, 662  
 Bayly, I. L., 248  
 Beach, L. R., 26  
 Beale, S. I., 444  
 Beaty, J. S., 542  
 Beck, C. F., 583  
 Beck, E., 140  
 Becker, P. B., 612  
 Becker-André, M., 435, 436  
 Beckett, A., 567, 568, 572  
 Beckman, J. M., 652  
 Beckmann, R. P., 586  
 Bedbrook, J., 435, 436  
 Bednarek, S. Y., 28, 33, 38, 43, 44  
 Beechey, R. B., 134  
 Beerhues, L., 400  
 Beevers, H., 472  
 Beevers, L., 36, 39, 41  
 Beggs, C. J., 359, 360  
 Beguin, P., 687  
 Behnke, S., 227, 234, 235, 425  
 Behrend, U., 339  
 Behringer, R. R., 415  
 Bekes, F., 228, 229  
 Belanger, F. C., 608  
 Beld, M., 414  
 Bell, D. J., 80, 93  
 Bell, J., 399  
 Bell, R. M., 479, 482  
 Bell, T. A., 682  
 Bellemare, G., 444  
 Beltrán, J.-P., 242, 256, 260, 261, 263, 394, 627, 643, 644, 646  
 Ben Arie, R., 677, 687, 688  
 Bendall, D. S., 332  
 Bender, M. M., 78, 79  
 Benedyk, M., 448  
 Beneytout, J.-L., 147, 170  
 Benfey, P. N., 435, 437, 519, 612, 642, 643  
 Benhamou, N., 653-55  
 Benito-Moreno, R. M., 219  
 BENNETT, A. B., 675-703; 631, 633, 663, 681, 683-86, 689-92  
 Bennett, C. D., 158, 161, 164  
 BENNETT, J., 281-311; 282-84, 286-94, 296, 300-3  
 Bennett, J. H., 29, 78, 86  
 Bennett, M. J., 508, 514, 515  
 Bensen, R. J., 66  
 Bensink, J., 359  
 Benson, E., 374  
 Bentley, D. L., 439  
 Benz, R., 129  
 Benzer, S., 627  
 Berg, J. M., 519  
 Bergami, M., 655  
 Berger, V., 303  
 Bergersen, F. J., 380, 384  
 Bergfeld, R., 432, 493  
 Bergmann, A., 429  
 Bergmann, H., 516  
 Bergquist, R. R., 219  
 Berkalo, C., 563  
 Berlin, J., 103  
 Berliner, L. J., 229  
 Bernatzky, R., 23, 394, 402, 412, 425  
 Berndt, W. B., 384, 385  
 Bernhard, W. R., 484  
 Bernhardt, P., 196  
 Bernier, G., 247, 268, 623  
 Bernstein, H. D., 600  
 Berridge, M. J., 363, 448  
 Berry, J. A., 331, 337-39, 341, 342, 603  
 Berry, J. O., 440, 441  
 Berry-Lowe, S. L., 434  
 Bertaud, W. S., 492, 493  
 Berthold, D. A., 168  
 Bertolasi, V., 82

- Bessoles, M., 107  
 Bessoule, J. J., 482  
 Bestajovsky, J., 84  
 Best-Belpomme, M., 602  
 Bethend, O., 67  
 Bevan, M., 612, 639, 695  
 Bevan, M. V., 26, 432  
 Bevan, M. W., 684, 685, 691  
 Bewley, J. D., 572, 573  
 Bhalla, P., 282, 296, 300, 301  
 Bhuvaneshwari, T. V., 510-12, 518  
 Bianchi, S., 520  
 Biasini, G., 213  
 Biggin, M. D., 643  
 Biggins, J., 299  
 Biggs, M. S., 676, 683, 689  
 Biggs, R. H., 654, 662  
 Bijl, L. H., 228  
 Bild, G. S., 149  
 Bilger, W., 327, 329, 330, 332, 562, 568, 571  
 Binder, H., 475  
 Binelli, G., 199  
 Binns, A. N., 210  
 Binns, M. E., 355  
 Bintrim, S. B., 402  
 Birberg, W., 664  
 Bird, C. R., 630, 631, 663, 676, 681, 683-87, 689-91, 693-95  
 Bishop, J. M., 439  
 Bishop, P. D., 652, 654, 668  
 Bisseling, T., 374, 386, 508, 510-14, 517, 518  
 Biswal, B., 443  
 Biswas, A. K., 601, 608  
 Bitoun, R., 539  
 Bittersmann, E., 299, 317-19, 323  
 Björkman, O., 315, 333-38, 340, 603  
 Blaas, J., 401  
 Black, M. T., 287, 293, 295, 296, 329  
 Black, W. C. IV, 655  
 Blacklow, W. M., 84  
 Blackman, P. G., 58, 68  
 Blakeley, S. D., 360  
 Blakeslee, A. F., 398  
 Blanchard, P. H., 80, 93  
 Blanco, L., 515  
 Blankenstein, P., 30  
 Blatt, M. R., 111, 112, 468  
 Blée, E., 476  
 Blecker, A. B., 533, 535, 536  
 Blekemolen, J. E., 39  
 Bleha, T., 82  
 Blevins, D. G., 374, 386  
 Blixt, S., 243  
 Blöbel, G., 25, 302, 586  
 Block, M. A., 470, 475, 483  
 Blondon, F., 520  
 Blonstein, A. D., 532, 533  
 Bloom, A. J., 111  
 Bloom, H. L., 681, 683  
 Bloom, M., 442, 590, 592  
 Blum, A., 610, 612  
 Bochenek, B., 512  
 Boeke, J. H., 398  
 Boelens, H., 155  
 Boersma, L., 111  
 Böger, P., 336  
 Bogorad, L., 425, 693  
 Bogucki, A., 213  
 Bogusz, D., 374, 380, 508, 519, 520  
 BOHLMANN, H., 227-40; 227, 229, 233-35  
 Boissière, M.-C., 560, 561  
 Bojsen, K., 518, 519  
 Bol, J. F., 24, 44, 45  
 Boland, M. J., 516  
 Boldingh, J., 146, 147, 149, 152-54, 159, 166, 175  
 Bole, D. G., 30  
 Boller, B. C., 377, 379  
 Boller, T., 45, 235  
 Bollig, I., 355  
 Bollini, R., 26, 28-30, 32, 33, 37, 38, 41  
 Bomort, J., 110  
 Bonas, U., 263  
 Bonaventura, C., 295  
 Bond, U., 580, 581, 587, 609  
 Bond-Nutter, D., 435, 436  
 Bonig, I., 401, 412, 634  
 Bonnard, G., 542  
 Bonnemain, J.-L., 110, 114  
 Bonner, B. A., 444  
 Bonner, D. M., 67  
 Bonner, J., 173  
 Bonnett, G. D., 82  
 Bonnett, H. T., 636  
 Bonneville, J.-M., 212, 516  
 Bookjans, G., 148, 158, 164, 165, 168, 169, 171, 174, 176, 178  
 Bookland, R., 43  
 Booth, A. N., 228, 232  
 Booth, P. J., 322  
 Borchert, S., 134  
 Borel, M., 117  
 Borisov, A. Y., 318  
 Borkovich, K. A., 605  
 Borland, A. M., 86  
 Börner, T., 432  
 Bornman, J. F., 335, 429  
 Boron, L., 512  
 Borrell, A. K., 84  
 Borst-Pauwels, G. W. F. H., 105, 109  
 Borthwick, H. A., 358, 362, 364, 365  
 Bose, S., 293  
 Boss, W. F., 449, 482  
 Bostock, R. M., 652  
 Botella, J., 484  
 Botterman, J., 26, 35  
 Böttger, M., 120  
 Bottin, H., 293  
 Bottino, P., 211  
 Bouchard, R. A., 400, 593, 594, 596, 609, 632  
 Boudet, A. M., 282, 425  
 Bouet, C., 514, 515  
 Boulter, D., 405  
 Bousquet, J. P., 167, 168  
 Boussac, A., 298  
 Boutry, M., 430  
 Bowler, P. A., 570  
 Bowles, D. J., 668, 669  
 Bowling, D. J. F., 110-13  
 Bowman, J. L., 242, 244, 247, 252, 254-58, 260-62, 266, 268, 394, 541, 643-45, 695  
 Bowsher, C. G., 134, 425  
 Boyer, G. L., 66  
 Boyer, J. S., 56, 57, 60-62, 66, 70, 110, 111, 119  
 Boyes, D. C., 402, 405, 406  
 Boyington, J. C., 166, 179  
 Boylan, K. L. M., 383  
 Boylan, M. T., 451  
 Boyle, S. A., 443  
 Bozarth, C. S., 66  
 Braaksma, F. J., 243  
 Bracker, C. A., 23  
 Bradbeer, J. W., 432  
 Bradbury, M., 330  
 Bradford, K. J., 534, 538, 676  
 Bradley, D. J., 517  
 Bradley, F. C., 165  
 Bradley, R. D., 490  
 Brady, C. J., 676, 681-86, 689, 690  
 Brady, E., 352  
 Brailsford, M. A., 134  
 Brain, A. P. R., 297  
 Bramel-Cox, P., 655  
 Branca, C., 542, 653  
 Braun, A. C., 210  
 Brawerman, G., 438  
 Bray, E. A., 56, 66  
 Brearley, T. H., 329  
 Brecht, E., 442  
 Brecht, J. K., 653, 662, 690  
 Bredemeijer, G. M. M., 401  
 Brederode, F. T., 45  
 Breckland, A. E., 533  
 Breiding, D. E., 440, 441  
 Breitmman, M. L., 415  
 Breitmeyer, J., 39  
 Brenner, S., 600  
 Brest, D. E., 355  
 Breton, J., 321, 323  
 Brett, C. T., 104, 120  
 Brettel, K., 321, 333  
 Breu, V., 484

- Breuning, G., 176  
 Brewbaker, J. L., 192, 193, 196  
 Brewin, N. J., 517  
 Brewin, N. K., 380  
 Briantais, J.-M., 295, 298, 314, 320, 323, 325, 327-31, 333, 334, 336-38, 341  
 Briarty, L. G., 103  
 Bricker, T. M., 286  
 Brieger, F. G., 254  
 Briggs, G. E., 104, 105  
 Briggs, W. R., 361, 425-31, 433, 434, 438, 439, 445, 446, 449, 450  
 Brink, D. E., 219  
 Brinkhorst van der Swan, D. L. C., 532, 533, 534  
 Brinkmann, K., 355  
 Brinster, R. L., 415  
 Brisson, N., 212  
 Britikov, E. A., 395  
 Britten, R., 423  
 Britton, G., 332  
 Britton, J. H., 534, 535, 539  
 Broadbent, K. P., 303  
 Brock, H., 318, 319, 321, 322  
 Brock, T. G., 284, 425  
 Brockman, J., 158, 165  
 Brockman, J. A., 477, 479, 484, 489  
 Brockman, L. L., 254, 255, 257, 260  
 Brockmann, J., 361  
 Brodl, M. R., 581, 608, 612  
 Brodo, I. M., 558  
 Brody, S., 471  
 Broekaert, W. F., 653, 654, 658  
 Broglie, K. E., 535  
 Broglie, R., 283  
 Broglie, R. M., 535  
 Broothaerts, W. J., 401  
 Brosio, P., 425, 429, 436  
 Brot, N., 581, 582, 589  
 Brown, D. H., 567, 568, 572  
 Brown, G. C., 178  
 Brown, J. H., 175, 176  
 Brown, M. S., 36, 490  
 Brown, S. M., 401, 626, 630, 631, 633, 682  
 BROWSE, J., 467-506; 468, 469, 471, 473, 474, 476-78, 483, 484, 486-489, 583, 585  
 Browse, J. A., 481, 492, 493, 498  
 Bruce, D., 299  
 Bruce, R. J., 653, 654  
 Bruckner, C., 174, 176  
 Brückner, G., 132, 133, 135, 136  
 Bruinsma, J., 684  
 Brummell, D. A., 535  
 Brun, W. A., 375  
 Brünger, A. T., 230, 231  
 Brunner, U., 562, 566  
 Brusslan, J., 425  
 Bubrick, P., 555, 566  
 Buchanan, B. B., 233, 282, 301, 302, 440  
 Buchanan, M. J., 35  
 Bucheli, P., 657, 658  
 Buckel, S., 23  
 Budde, R. J. A., 283, 300, 472  
 Büdel, B., 560  
 Budelier, K. A., 399, 401, 625-27, 632, 634, 635, 638, 641, 642  
 Buechler, J. A., 290  
 Buescher, R. W., 663, 683, 689  
 Buffard, D., 42  
 Bujarski, J. J., 212  
 Bulleid, N. J., 30  
 Bunning, E., 352, 357, 361, 364  
 Burch, L., 546  
 Burgess, T. L., 34  
 Bürgi, R., 283  
 Burgoyne, R. D., 354  
 Burke, J. J., 292, 607, 610  
 Burke, T. J., 605, 606  
 Burkert, A., 140  
 Burnell, J. N., 300  
 Burnett, B. K., 512, 514, 517  
 Burris, R. H., 382, 383  
 Burschka, C., 67  
 Burton, J. D., 472  
 Bush, D. S., 105, 106, 601, 608  
 Bussink, H. J., 512, 517  
 Bustos, M. M., 41, 426  
 Butcher, G., 360  
 Butcher, G. W., 517  
 Butler, G. W., 380, 384  
 Butler, L., 243  
 Butler, R. D., 560  
 Butler, W. L., 314, 316, 321, 333, 338, 424  
 Buttner, C., 174, 176  
 Bourmeijer, W. F., 451  
 Buvinger, W. E., 282, 290  
 Buxton, B., 27  
 Buzby, J., 425, 437  
 Byerrum, R. U., 485  
 Byrne, D. H., 428  
 Byrne, H., 661  
 Bytebier, B., 211  
 C  
 Caboche, M., 220, 363, 539  
 Cairney, J. W. G., 115  
 CAIRNS, A. J., 77-101; 80, 86-91, 93, 94, 96  
 Callis, J., 220, 605, 606  
 Calvert, H. E., 508  
 Cameron, G. S., 167  
 Camp, P. J., 472  
 Campbell, B. C., 655  
 Campbell, C. H., 36  
 Campbell, C. L., 299  
 Campbell, J. H., 408  
 Campbell, L. C., 481, 492  
 Campbell, N. A., 112, 113  
 Campbell, R. L., 230  
 Campbell, W. F., 608  
 Campos, F., 512, 514, 516, 517, 519  
 Camut, S., 510, 512, 518, 520  
 Canani, O., 288, 289, 294  
 Candolle de A. P., 274  
 Canny, M. J., 110, 111, 116  
 Cantliffe, D. J., 679  
 Canvin, D. T., 379, 383  
 Cao, J., 326  
 Cao, Y.-Z., 492, 493  
 Caplan, A. B., 209, 217, 218, 220  
 Carboneo, P., 227-30, 232, 233, 235, 236  
 Cardarelli, M., 542  
 Cardelli, J. A., 39  
 Carey, C. K., 557  
 Carey, E. E., 444  
 Carland, F., 540  
 Carlson, W. R., 191, 192  
 Carman, G. M., 479  
 Carpentier, R., 242, 243, 247, 249, 250, 252, 256, 258, 260, 262, 263, 265, 267, 271, 272, 639, 640, 643, 646  
 Carpita, N. C., 79, 80, 86, 89, 91, 93, 107, 677  
 Carr, J. P., 440  
 Carrasco, L., 230, 232  
 Carrayol, E., 515  
 Carroll, B. J., 374, 521  
 Carroll, R. T., 152, 153, 159, 164, 166, 169, 179  
 Carr-Smith, H. D., 360  
 Carson, C. B., 537, 538  
 Casadevall, E., 563  
 Casas, J., 157  
 Cascio, D., 301  
 Casey, R., 156-58, 172  
 Cashmore, A. R., 423, 437  
 Cashmore, A. R., 425, 427, 429, 435-37, 448  
 Casimir, M. A. F., 120  
 Caspar, T., 583, 585  
 Cass, D. D., 191, 193-97  
 Cass, L. G., 688  
 Cassab, G. I., 108, 518, 677  
 Cassagne, C., 482  
 Castellfranco, P. A., 444



- Castresana, C., 24, 44, 435, 436  
 Cattaruzza, L., 382, 385  
 Cerceau-Larrival, M.-T., 200  
 Ceriotti, A., 31-33, 38  
 Cervone, F., 653, 655-57  
 Cevallos, M. A., 512  
 Chafoules, J. G., 511  
 Chalifour, F. P., 382, 383  
 Chamberland, H., 653-55  
 Chan, H. T., 682  
 Chan, H. W.-S., 146, 147, 149, 151, 153, 154, 156, 175  
 Chandler, P., 26  
 Chandler, V., 207, 215  
 Chang, C., 541, 581, 582, 589, 695  
 Chang, M., 508  
 Chang, Y. C., 282, 284  
 Chao, A., 402  
 Chapin, F. S., 62  
 Chapman, D. J., 322  
 Chapman, M. S., 301  
 Chappell, J., 425, 434  
 Chappell, T. G., 586, 587  
 Charles, D. J., 470, 472  
 Chatterton, N. J., 78, 80, 81, 83, 85, 86, 88, 93, 96  
 Chavannes, E., 271, 273  
 Cheesbrough, T. M., 147, 154, 470, 474, 486  
 Cheesbrough, V., 496  
 Chelvarajan, R. L., 178  
 Chen, C. H., 402-7  
 Chen, F. L., 514, 515  
 Chen, Q., 442, 583, 585, 593, 595, 598, 599, 603, 604, 607  
 Chen, Y.-M., 606  
 Chen, Y.-R., 448  
 Cheng, B., 402  
 Cheng, H.-C., 449  
 Cheng, M. Y., 590  
 Cheng, Y.-S., 113  
 Cheong, J.-J., 664, 665  
 Cherry, J. H., 470, 472  
 Chersi, A., 382, 385  
 Chesnut, R. S., 24  
 Chester, J., 158, 164, 165  
 Cheung, P. W., 81  
 Chia, T.-F., 512  
 Chiba, N., 120  
 Chiba, S., 81  
 Chibbar, R. N., 695  
 Chin, D. J., 490  
 Chirgwin, J. M., 39  
 Chirico, W. J., 586  
 Chitnis, P. R., 283, 284, 442, 443  
 Chittenden, R. J., 242, 248, 254  
 Cho, S. H., 470, 474  
 Choi, J.-K., 686  
 Chollet, R., 283, 300  
 Chonoles, K., 211  
 Chory, J., 433, 451  
 Chothia, C., 161  
 Chou, M., 606  
 Chou, P. Y., 164  
 Choudhury, N. K., 443  
 Chow, W. S., 336, 429  
 Chretien, P., 610  
 CHRISPEELS, M. J., 21-53; 23, 26-30, 32-35, 37-39, 41-43, 517, 608, 609  
 Christ, C., 256  
 Christeller, J. T., 383, 592  
 Christensen, A. H., 427, 445, 605, 606  
 Christianson, M. L., 256, 541  
 Christoffersen, R. E., 676, 688, 695  
 Christopher, J. P., 148, 149  
 Christou, P., 214, 216  
 Chua, N.-H., 283, 302, 363, 364, 425, 427, 429, 430, 433, 435-37, 443, 444, 446-48, 512, 519, 612, 642, 643, 693  
 Chudek, J. A., 380  
 Chuman, L., 471  
 Church, A. H., 269  
 Chvatchko, Y., 40  
 Chye, M., 427  
 Chylla, R. A., 326, 329  
 Cimino, G. D., 541  
 Claes, B., 66, 209, 217, 218, 220  
 Clapham, D., 448, 449  
 Clapoff, S., 415  
 Clark, C., 230, 235  
 Clark, K. R., 402, 412  
 Clark, R. D., 287, 291  
 Clark, S. E., 443  
 Clarke, A. E., 190, 198, 394, 401, 402, 412, 634  
 Clarke, M. L., 81, 93  
 Clarkson, D. T., 104, 108, 110, 115, 428  
 Clausen, S., 227, 234, 235  
 Clegg, M. T., 695  
 Cleland, R. E., 103, 110-12, 117-21, 334-36  
 Cleveland, D. W., 438  
 Cleves, A. E., 483  
 Cleyet-Marcel, J. C., 374  
 Cline, K., 303, 443, 475  
 Cloney, L. P., 592  
 Clore, G. M., 230, 231  
 Clos, J., 612  
 Clough, R. C., 473  
 Clouse, S., 432  
 Clouse, S. D., 639  
 Clugston, C., 427, 433  
 Cobb, A. H., 134  
 Cock, J. M., 515  
 Cocking, E. C., 374, 510  
 Coe, E. H., 243, 266  
 COEN, E. S., 241-79; 242, 243, 247, 249, 250, 252, 256, 258, 260, 262, 263, 265, 267, 271, 272, 639, 640, 643, 646  
 Cohan, C. E., 219  
 Cohen, A. S., 357, 363  
 Cohen, B.-S., 166  
 Cohen, D. I., 627  
 Cohen, J. D., 543  
 Cohen, Y., 175, 177  
 Coker, G. T., 383, 385  
 Colbert, J. P., 445  
 Colbert, J. T., 359, 361, 426-28, 430, 434, 438  
 Coleman, A. W., 190, 192, 196  
 Coleman, C. E., 402  
 Coleman, R. A., 479, 482  
 Collier, N. C., 602, 603  
 Collinge, D. B., 236  
 Collins, G. B., 148, 156, 170, 174  
 Collins, P. D., 402, 412  
 Collis, B. E., 88, 93, 94  
 Colman, A., 31  
 Colquhoun, I. J., 689  
 Comai, L., 691  
 Concert, H. J., 78  
 Conde, V., 512, 514  
 Condit, C. M., 632  
 Cone, J. W., 450  
 Cone, K. C., 207, 215  
 Conn, E. E., 469  
 Connelly, J. A., 472  
 Conner, T. W., 604  
 Connor-Ward, D. V., 210, 214  
 Cook, M. N., 158, 161  
 Cooper, D. B., 228  
 Cooper, P., 588, 601, 605, 606  
 Cooper, R. J., 84  
 Copeland, L., 380, 383, 384, 516  
 Cordes, S., 676, 689, 690  
 Corey, E. J., 153  
 Cornel, D., 110  
 Cornelissen, B. J. C., 24, 44, 45  
 Cornelius, G., 354  
 Cornic, G., 330, 331, 336-38  
 Cornish, E. C., 190, 198, 394, 399, 401, 402, 412, 626, 634, 642  
 Cornish, K., 63, 66  
 Corpuz, G. P., 230, 235  
 Corriveau, J. L., 190, 192  
 Cortez, N., 287, 300, 301  
 Coruzzi, G., 283  
 Coruzzi, G. M., 425, 431, 514  
 Cosgrove, D., 118

## 710 AUTHOR INDEX

- Cosgrove, D. J., 103, 111, 112, 119, 120  
 Cosio, E. G., 664  
 Costantino, P., 542  
 Costello, L. L., 158-62  
 Costigan, S. A., 426, 428, 430, 434  
 Coté, G., 448  
 Cote, G. G., 482, 652  
 Cote, P., 63  
 Cottingham, I. R., 470, 473  
 Cotton, J. L. S., 428  
 Coudron, C. A., 172  
 Coughlan, S. J., 282, 288, 289, 291  
 Coulson, E. J., 232  
 Coupland, G., 540  
 Cousson, A., 510, 653, 659  
 Covès, J., 470, 475  
 Cowan, D. A., 573  
 Cowan, I. R., 57, 60, 63, 358, 361  
 Cox, K. H., 626, 631, 632, 634, 635, 638, 641  
 Craig, E. A., 580, 581, 583, 584, 586, 587, 589, 593, 598, 602, 606, 610  
 Craig, I. L., 248  
 Craig, R. M., 495, 496  
 Craig, S., 30, 33, 43, 520  
 Craik, C. S., 158-62  
 Crain, R. C., 363, 448, 482, 652  
 Cralle, H. T., 375, 377  
 Cram, W. J., 112  
 Cramer, W. A., 287, 288, 293  
 Crasnier, M., 117  
 Creelman, R. A., 66, 533, 535, 537  
 Critchley, C., 335  
 Crittenden, P. D., 539  
 Crofts, A. R., 298, 326  
 Crofts, J., 333  
 Crook, N. E., 359  
 Crooke, S. T., 158, 161  
 Crookes, P. R., 683  
 Crosby, W. L., 695  
 Cross, A. R., 483  
 Crouch, M. L., 401, 626, 630, 631, 633, 682  
 Crowe, L. K., 397  
 Crowther, R. A., 36  
 Croy, R. R. D., 405  
 Crystall, B., 322  
 Cullimore, J. V., 508, 514, 515, 520, 521  
 Cumming, A. C., 444, 445  
 Cumming, B. G., 352, 357, 363-65  
 Cuozzo, M., 436, 437  
 Curmi, P. M. G., 301  
 Curtis, P. S., 395  
 Cusick, F., 257  
 Cyr, R. J., 426  
 Czapski, J., 174  
 Czamecka, E., 581, 582, 593-96, 598, 599, 612  
 D  
 Daan, S., 366  
 Dabas, S., 377  
 Dahlen, S.-E., 146, 147, 167, 172, 176  
 Dahms, N. M., 39  
 Dahse, I., 104, 106  
 Daie, J., 110, 111, 116  
 Daines, R. J., 214  
 Dainty, J., 104, 105, 109  
 Dakora, F. D., 378, 512  
 d'Alarcao, M., 153  
 Dale, E. E., 248, 266  
 Dale, J. E., 63, 64  
 Daley, L. S., 230, 232  
 Daley, P. F., 342  
 Dalie, B., 581, 582, 589  
 Dalling, M. J., 84  
 Dalton, F. N., 108  
 Daminati, M. G., 33, 38  
 Dang, C. V., 587  
 Dangel, J. L., 435, 436  
 Daniel-Vedele, F., 425, 429  
 Darbyshire, B., 84  
 Darrah, P. M., 425  
 Darvill, A. G., 510, 652, 653, 655-59, 661, 664, 677, 678  
 Darwin, C., 270, 271, 274  
 Darwish, K., 593, 608, 609  
 Dashek, W. V., 395  
 Dathe, W., 174, 176  
 Datko, A. H., 480, 481  
 Datla, R. S. S., 695  
 Datta, K., 213, 518  
 Dutta, N., 436, 448  
 Dutta, S. K., 213  
 Datte, Y., 520  
 Daughtry, C. S. T., 84  
 Davey, M. R., 206, 374  
 Davidian, J.-C., 108, 110, 115  
 Davidson, E., 423  
 Davies, C. S., 148, 150, 151, 158, 170, 180  
 Davies, D. D., 382, 384, 385  
 Davies, E., 72  
 Davies, E. C., 429  
 Davies, J. N., 689, 690  
 Davies, J. W., 212  
 Davies, K., 689, 690  
 Davies, P. J., 540  
 DAVIES, W. J., 55-76; 56-58, 60-63, 66-68, 70, 72  
 Davis, A. S., 213  
 Davis, G. L., 190  
 Davis, M. A., 627  
 Davis, M. C., 436  
 Davis, P. C., 34  
 Davis, R. W., 535, 693  
 Daxenbichler, M. E., 228, 232  
 Day, D. A., 136, 137, 376-78, 384, 385, 517  
 Day, H. M., 514, 520, 521  
 Dazzo, F. B., 510, 511  
 Deacon, A. C., 93  
 Deak, M., 451  
 Dean, C., 425, 435, 442  
 de Beuckeleer, M., 416, 641  
 de Billy, F., 510, 512, 518, 520  
 Deblaere, R., 26, 35  
 Deboeck, F., 211  
 de Bruijn, F. J., 519, 520  
 De Bruin, M., 109  
 Decock, B., 401  
 Dedner, N., 299  
 Degra, L., 655, 657  
 deGreve, H., 211  
 deGroot, J. J. M. C., 149, 152  
 de Groot, P. F. M., 608  
 Dehesh, K., 428, 441  
 Deigle, C., 70  
 Deikman, J., 691  
 Deisenhofer, J., 164, 165  
 Deitzer, G. F., 365, 428  
 DeJohn, A. W., 541, 695  
 DeJong, T. M., 375  
 Dekens, R. G., 450  
 Dekeyser, R., 66  
 Dekeyser, R. A., 209, 217, 218, 220  
 Dekker, B. M. M., 35  
 Dekker, J. P., 323, 324  
 de Lajudie, P., 517, 518  
 De la Peña, A., 219  
 De las Peñas, A., 512  
 Delauney, A. J., 508, 514, 693  
 del Campillo, E., 78, 88, 94, 96  
 DeLeeuw, H. C. G. M., 608  
 Delepelaire, P., 296  
 DellaPenna, D., 631, 633, 663, 681, 683-86, 689-92  
 Delmer, D. P., 107, 677, 678  
 De Lorenzo, G., 653, 655-57  
 Delrot, S., 110, 114  
 DeLuca-Flaherty, C., 586, 587  
 Delvallee, I., 199  
 Demandre, C., 482  
 De Marco, A., 229  
 Demarty, M., 104-6, 109  
 Demmers, C., 24  
 Demmig, B., 315, 330, 333-36, 338, 340  
 Dermig-Adams, B., 329, 332, 335  
 Demmin, D. S., 282, 284  
 den Boer, B., 541, 695  
 Denecke, J., 26, 35  
 Deng, M.-D., 363  
 Deng, X., 293, 442

- Dengler, N. G., 66  
 Denison, R. F., 374, 378  
 Dennis, D. T., 442, 443, 472, 590, 592  
 Dennis, E. S., 374, 380, 508, 519, 520, 635  
 den Ouden, A., 323, 324  
 de Pater, B., 219  
 de Pater, B. S., 510, 511  
 Depta, H., 36  
 Deroche, M.-E., 515  
 DeRocher, A. E., 442, 581-83, 585, 589, 593, 595, 596, 599, 603, 604, 607-9  
 Derouet, L., 200  
 De Rycke, R. M. U., 209, 217, 218, 220  
 de Sa, C. M., 602  
 de Sa, M.-F. G., 602  
 Deshaies, R. J., 586  
 Deslandes, Y., 82  
 Detchepeare, S., 195, 197, 199  
 Detmer, J. J., 213  
 DeVay, J. E., 690  
 De Vries, G. E., 382, 383  
 De Vries, S. C., 512, 517  
 DeWet, J. M. J., 219  
 de Wet, J. R., 221  
 Dewit, M., 288  
 DeWit, P. J. G. M., 652  
 DeWolf, W. E., 155  
 Dhankar, J. S., 68  
 Dharmasiri, S., 429  
 Dhinda, R. S., 175  
 Diamantidis, G., 117  
 Diaz, C. L., 510, 511  
 Diaz del Castillo, L., 374, 378  
 Dicker, J. W., 511  
 Dickerson, A. G., 91  
 Dickey, L. F., 432, 439  
 Dickinson, C. D., 30, 39, 42, 43  
 Dickinson, D. B., 688  
 Dickinson, H. G., 193, 196, 395, 397, 398, 401  
 Dickstein, R., 512, 514, 517, 518  
 Didembourg, C., 104, 655  
 Diehl, R. E., 158, 161, 164  
 Dietrich, A., 667  
 Dietschy, J. M., 107  
 Dietz, K.-J., 110, 111  
 Dilley, D. R., 676  
 Dilley, R. A., 286-88, 293, 299  
 Dilworth, M. J., 384  
 DiMaio, J., 681, 693  
 Dimond, R. L., 39  
 Dinauer, M. C., 627, 628  
 Dion, P., 382, 383  
 Dixon, C. K., 41  
 Dixon, J. E., 158, 162, 164, 165  
 Dixon, R. A. F., 158, 161, 164, 176, 177, 432, 508, 510, 639  
 Djordjevic, M. A., 508  
 Doares, S. H., 657, 658  
 Dobberstein, B., 25, 600  
 Dobres, M. S., 425, 426, 431, 447  
 Doerffer, R., 342  
 Doerner, P., 432  
 Doerner, P. W., 639  
 Does, R. E., 693  
 Doherty, H. M., 668, 669  
 Doke, N., 667  
 Dombrowski, J. E., 44  
 Domoney, C., 157, 172  
 Doms, R. W., 23, 32, 33  
 Donaldson, D. D., 34, 43  
 Donaldson, G. K., 442, 590, 592  
 Done, J., 363  
 Donelson, J. E., 581, 582, 589  
 Doney, R. C., 401, 405, 410, 642, 643  
 Donkelaar, A. V., 34  
 Donn, G., 213  
 Doolittle, R. F., 162, 163  
 Dooner, H. K., 483, 537, 540  
 Dorbe, M.-F., 425, 429  
 Dorel, C., 26, 35  
 Dorffling, K., 70  
 Doring, H.-P., 540  
 Dorn, A., 110, 116  
 Dorne, A. J., 470, 475, 478, 483  
 Dorne, A.-M., 282, 283, 301  
 Doubrava, N., 659, 660  
 Douce, R., 130, 470, 475, 476, 478, 479  
 Douglas, A., 554, 557, 558  
 D'Ovidio, R., 657  
 Dowhan, W., 483  
 Downey, R. K., 495, 496  
 Downs, C. G., 682  
 Downs, R. J., 358  
 Downton, W. J. S., 67  
 Doyle, S., 242, 249, 250, 258, 267  
 Draheim, J. E., 152, 159  
 Drake, R. R., 303  
 Draper, E. A., 80, 81  
 Draper, J., 210  
 Drescher, K., 354  
 Dreses-Werringloer, U., 135  
 Drevon, J. J., 374  
 Drews, G. N., 242, 254-57, 260, 394, 541, 643  
 Dreyfuss, G., 438  
 Driouch, A., 38  
 Dröschler, L., 138  
 Drumm, H., 431  
 Drumm-Herrel, H., 425, 427, 428, 432  
 Drury, K. S., 360  
 Dry, I. B., 137  
 Dubac, J. P., 483  
 Dubois, D., 84  
 Duc, G., 520, 521  
 Duck, N., 399, 581, 583-85, 609  
 Dudley, M. E., 510  
 Dudley, R., 693  
 Dudley, S. A., 572  
 Duguid, J. R., 627, 628  
 Duine, J. A., 155, 159  
 Dujardin, E., 427  
 Dujardyn, M., 335  
 Duke, S. H., 374, 377, 382, 383, 386  
 Dumas, C., 191, 193-99  
 Dunahay, T. G., 442  
 Duncan, H. J., 120  
 Dunham, W. R., 152, 153, 159, 164, 169  
 Dunlap, J. C., 354  
 Dunn, K., 512, 514, 517  
 Dunsmuir, P., 26, 425, 429, 435, 436, 442  
 Dupont, J., 159, 168  
 Dupont, M. S., 689  
 Dupuis, I., 194, 195, 197, 198  
 Duran, N., 150, 159  
 Durbin, M. L., 687, 695  
 During, H., 64  
 Duxbury, C. L., 175, 176  
 Duyssen, M., 444  
 Duyssens, L. N. M., 316, 317, 320, 323, 325, 328  
 Dwyer, K. G., 402, 405, 410, 642, 643  
 Dyer, T. A., 299, 425  
 E  
 Eagles, G., 668  
 Eaks, I. L., 692  
 Ealing, P. M., 156, 158, 172  
 East, E. M., 397  
 Ebel, J., 470, 472, 652, 664, 666  
 Eberhard, S., 659, 660  
 Ebert, E. L., 39  
 Ebert, P. R., 394, 402, 412, 634  
 Ebrahim-Neshat, F., 227, 234  
 Eckert, J. R., 533, 535, 536, 693  
 Eckerskorn, C., 135  
 Eckes, P., 425  
 Edelman, J., 78, 79, 86, 88-91, 93, 94  
 Edelman, L., 581, 582, 593, 599  
 Edgar, B. A., 263  
 Edmunds, L. N. Jr., 352, 354, 356

## 712 AUTHOR INDEX

- Edwards, A., 110  
 Edwards, G. E., 133, 135, 139, 300  
 Edwards, J. W., 425, 431  
 Edwards, K., 639  
 Edwards, M. C., 110, 111, 113  
 Egin-Buhler, B., 470, 472  
 Egli, M. A., 374, 383, 386, 514, 520, 521  
 Egmond, M. R., 153, 159  
 Eguchi, G., 485  
 Ehmman, B., 425  
 Ehrenberg, A., 152  
 Ehses, U., 84  
 Ehrwald, R., 108  
 Eichacker, L. A., 441, 443  
 Eide, J., 444  
 Einspahr, K. J., 468, 482, 536, 652  
 Eisenberg, A. J., 401, 629  
 Eklund, H., 164, 165  
 Elbein, A. D., 28, 33, 37, 38  
 Elble, R., 256  
 Elfving, F., 566  
 Elgin, S. C. R., 408  
 Elleman, C. J., 395, 398  
 Eller, N., 219  
 Elliott, R., 242, 249, 250, 258, 267, 432, 439  
 Elliott, R. C., 425, 431, 432, 439  
 Ellis, E., 442  
 Ellis, J., 582, 590  
 Ellis, R. J., 297, 426, 434, 590, 592  
 Ellis, T. H. N., 639, 640  
 Elmes, M. L., 490  
 El-Sawi, Z., 542, 544, 545  
 Elthon, T. E., 159, 168  
 Emerich, D. W., 383  
 Emes, M. J., 134  
 Emr, S. D., 39, 40, 41  
 Engelman, D. M., 161  
 Engelmann, W., 354  
 England, S., 134  
 English, J., 173  
 Englmaier, P., 96  
 Engman, D. M., 581, 582, 589  
 Enriquez, C., 516, 517, 519  
 Enser, U., 138  
 Ephritikhine, G., 110, 538  
 Epp, O., 164, 165  
 Ernst, D., 429  
 Ernst, S. M., 300  
 Ertl, L., 565, 571  
 Escalada, J. A., 84  
 Esch, J. J., 402, 405, 406  
 Eschrich, W., 112, 113  
 Eskin, N. A. M., 146, 147, 155, 156, 178  
 Eakins, K., 444  
 Eakue, W. A., 35  
 Eamon, B., 40  
 Esquerre-Tugaye, M.-T., 177, 654, 668  
 ESTELLE, M., 529-51; 534, 539  
 Estelle, M. A., 533, 535, 536  
 Etienne, A. L., 314, 325, 327, 338  
 Ettl, F., 668, 669  
 Eitzler, M. E., 42  
 Evans, G. A., 415  
 Evans, H. J., 515  
 Evans, J., 227, 233  
 Evans, M. L., 110, 116  
 Evans, P. T., 626  
 Even, D., 593, 595, 601, 604  
 Everat-Bourbouloux, A., 114  
 Everett, J., 78  
 Evett, G. E., 228, 229  
 Eward, J.-L., 625, 632  
 Ewings, D., 661  
  
**F**  
 Fabi, G. C., 194, 195, 197  
 Falkner, G., 107  
 Falkowski, P. G., 283, 284  
 Fang, G., 695  
 Fang, R.-X., 436, 693  
 Faraday, C. D., 23, 401, 403  
 Farchaus, J., 286, 288, 299  
 Farchaus, J. W., 293  
 Faris, M. A., 377, 382  
 Farkas, G. L., 177  
 Farkas, V., 661  
 FARMER, E. E., 651-74; 179, 468, 652, 659, 665, 666, 668  
 Farnen, K. J. F., 516  
 Farquhar, G. D., 63, 111, 358, 361  
 Farrar, J. F., 86, 88, 95, 572  
 Farrelly, F. W., 605  
 Fasman, G. D., 164  
 Fassler, J., 435  
 Faucher, C., 508, 510, 513, 660  
 Faucher, M., 110  
 Faust, J. R., 490  
 Favreau, M., 435  
 Fay, P., 562  
 Faye, L., 29, 33, 37, 38  
 Feather, M. S., 81  
 Fedoroff, N., 540, 695  
 Feenstra, W. J., 243, 374  
 Feger, M., 666  
 Fehling, E., 493  
 Feierabend, J., 175  
 Feige, G. B., 565  
 Feinbaum, R., 451, 512, 514, 517  
 Feiters, M. C., 152, 164, 166  
 Feldman, L. J., 534  
 Feldmann, K. A., 242, 256, 394, 541, 643  
 Feldwisch, J., 31, 536, 543  
 Felix, G., 38, 45, 520  
 Felling, C. E., 375  
 Fellows, R. J., 110  
 Fender, S. E., 610  
 Feramisco, J. R., 586  
 Ferguson, D. L., 606  
 Ferguson, I. B., 104, 120  
 Ferguson-Miller, S., 297  
 Fernandez de Caley, R., 227, 228, 230, 232, 233, 235  
 Fernando, S. M., 374, 378  
 Fernyhough, P., 296, 334  
 Ferraris, R., 57  
 Ferretti, V., 82  
 Ferrier, J. M., 114  
 Fewson, C. A., 300, 363  
 Fiechter, E., 559, 560, 566, 568, 571  
 Filion, W. G., 582, 610  
 Fillatti, J. J., 691  
 Finan, T. M., 384  
 Finazzi-Agro, A., 166  
 Finch, J. T., 36  
 Findlay, J. B. C., 290  
 Fine, M., 158, 162, 165  
 Finkelstein, A. V., 161  
 Finkelstein, D. B., 605  
 Finkelstein, R. R., 537  
 Finn, G. A., 375  
 Firmin, J. L., 172  
 Firoozabady, E., 691  
 Fischer, I., 302  
 Fischer, K., 135  
 FISCHER, R. L., 675-703; 633, 662, 663, 676, 681, 683, 684, 689-92  
 Fisher, N., 228  
 Fisher, R. A., 408  
 Fisher, S. M., 167  
 Fishman, M. L., 680  
 Fitch, M. M. M., 695  
 Flach, D., 104, 106, 111  
 Flaherty, K. M., 586, 587  
 Flavell, R. B., 402, 403  
 Fleming, A. I., 519  
 Fleming, H. P., 682  
 Fleming, J., 158, 164, 165  
 Fleoner, L. A., 30  
 Fliege, R., 130, 132  
 Florkiewicz, R. Z., 26, 41  
 Flower, D. J., 57  
 Flowers, T. J., 103, 119  
 FLÜGGE, U.-I., 129-44; 129, 130, 132-37, 139, 140, 302, 443  
 Fluckiger, R., 155  
 Fluhr, R., 399, 425, 433, 435, 635, 636, 658  
 Flynn, G. C., 586-88  
 Foard, D. E., 532

- Fobel, M., 175  
 Folch, J., 514  
 Follin, A., 542  
 Fondeville, J. C., 358, 362  
 Ford, A. M., 439  
 Ford, G., 430  
 Forde, B. G., 514, 520, 521  
 Forde, J., 27  
 Foriers, A., 42  
 Fork, D. C., 295, 298  
 Forkmann, G., 400  
 Forster, J. G., 133  
 Forsythe, K. L., 81  
 Forti, G., 293, 294  
 Fortin, M. G., 514, 517, 518, 605  
 Fosket, D. E., 426  
 Foster, V., 516  
 Fournier, J., 177  
 Fowke, L. C., 36  
 Fox, A. L., 106  
 Fox, P. C., 594, 612  
 Foyer, C. H., 282, 283, 296, 301, 303, 334, 335  
 Fraley, R. T., 206, 210, 399, 401, 435, 581, 583, 584, 626, 627, 632, 634, 691  
 Franceschi, V. R., 24, 115, 116, 174, 400  
 Francke, A., 148  
 Franklin, R. E., 110  
 Franssen, H., 512, 513, 518  
 Franssen, H. J., 512, 513, 517, 518  
 Frappier, J. R. H., 593, 594, 596  
 Fred, E. B., 374, 375  
 Freedman, R. B., 30  
 Freeling, M., 532  
 Freeman, J., 520  
 Frehner, M., 88  
 French, A. D., 82  
 French, D., 81  
 French, R., 212  
 Frenkel, C., 677, 687, 688  
 Frensdorff, A., 555  
 Frentzen, M., 473, 475, 479, 484, 487  
 Freundling, C., 111-14  
 Freundt, H., 36  
 Frey, T., 664  
 Freyer, G. A., 150, 157  
 Frey-Wyssling, A., 560  
 Frid, D., 288, 289  
 Friedl, T., 555, 566  
 Friend, J., 170  
 Primer, A., 175  
 Primer, A. A., 175  
 Fristensky, B., 439  
 Fristensky, B. R., 439  
 Pritig, B., 45, 655  
 Fromm, J., 112, 113  
 Fromm, M. E., 206, 207, 213-15, 220, 640  
 Fronza, G., 382, 385  
 Frosch, S., 357  
 Frowa, C., 199  
 Fry, J., 691  
 Fry, S. C., 104, 108, 654, 661, 662, 677, 678, 680  
 Fuchs, A., 97  
 Fuchs, Y., 658, 677, 687, 688, 690  
 Fugedi, P., 664  
 Fujii, T., 24  
 Fujimoto, H., 213  
 Fujiyama, K., 686  
 Fukai, K., 380, 383, 384  
 Fukui, T., 31, 543  
 Fuller, G. L., 64  
 Fuller, S., 32  
 Fulsom, D. R., 443  
 Funahashi, S., 89  
 Funk, C. D., 158-60, 162, 164, 165, 180  
 Funk, M. O., 148, 149, 152, 153, 159, 164, 166, 169, 179  
 Furley, A. J. W., 439  
 Furuya, M., 358-60, 363-65, 426-28, 433, 451  
 Putai, M., 31, 543  
 Fütterer, J., 212  
  
 G  
 Gabay-Laughnan, S., 400  
 Gabriel, D. W., 508  
 Gad, A. E., 220  
 Gadai, P., 515  
 Gadelle, A., 654  
 Gaff, D. F., 196, 197  
 Gaffney, B. J., 166, 179  
 Gage, R. A., 109  
 Gagne, W. E., 228, 232  
 Gaitanaris, G. A., 589  
 Gaito, S. T., 378, 379  
 Gal, A., 288, 289, 291  
 Galangau, F., 425, 429  
 Galbraith, D. W., 432, 691  
 Galfre, G., 64  
 Galili, G., 25  
 Gallagher, S., 449, 450  
 Gallagher, T. F., 426, 434  
 Galliard, T., 146, 147, 151, 153, 154, 156, 175, 176  
 Gallo, M., 432, 439  
 Gallop, P. M., 155  
 Galston, A. W., 113, 355, 357, 358, 361  
 Galt, S., 174  
 Galun, M., 555, 557, 562, 566  
 Gamble, H. R., 658  
 Gamble, P. E., 441, 443  
 Gamper, H. B., 541  
 Garab, G., 296, 326  
 Garabedian, M. J., 605  
 Garber, R. C., 112, 113  
 Garbers, C., 517  
 Garcia-Bellido, A., 243, 257, 262  
 Garcia-Luque, I., 435, 436  
 Garcia-Olmedo, F., 227-30, 232, 233, 235, 236  
 Gardiner, M., 30  
 Gardiner, S. E., 475, 481, 492, 493  
 Gardner, H. W., 173  
 Gardner, R., 211  
 Gardner, W. K., 115  
 Gardside, E., 520  
 Garg, P. J., 664  
 Garg, O. P., 377  
 Garrec, J.-P., 113  
 Garrels, J. I., 581, 582, 589  
 Garssen, G. J., 149, 152  
 Gärtner, G., 555, 565, 566  
 GASSER, C. S., 621-49; 206, 399, 401, 581, 583, 584, 625-27, 630, 632, 634, 635, 638, 641, 642  
 Gast, D., 449  
 Gatehouse, J. A., 405  
 Gateby, A. A., 442, 590, 592  
 Gates, P. J., 397, 405  
 Gatz, C., 438  
 Gaude, T. C., 193, 196  
 Gaudillere, J. P., 80  
 Gaudreault, P., 39  
 Gausepohl, H., 600  
 Gausing, K., 227, 233, 234, 686  
 Gaynor, J. J., 535  
 Gebhardt, C., 532, 533  
 Gee, R. W., 485  
 Geetha-Habib, M., 30  
 Gegenbach, B. G., 472  
 Geiger, D. R., 110  
 Gelpi, E., 157  
 Geltz, N. R., 198, 199  
 Gelvin, S. B., 210  
 Gemmell, C. N., 355  
 Genetello, C., 542  
 Genty, B., 333, 338  
 Geoffroy, P., 45  
 Georgopoulos, C., 580, 583, 587, 589, 590, 612  
 Gerard, J., 380, 384  
 Gerats, A. G. M., 628  
 Gerber, D. W., 485  
 Gerber, J., 132  
 Gerritsen, Y. A. M., 45  
 Gething, M.-J., 582, 583, 588  
 Geuze, H. J., 39  
 Gharayal, P. K., 107  
 Ghirardi, M. L., 321, 326, 328, 329  
 Ghislain, M., 110, 538

- Giacometti, M., 285  
 Gianinazzi, S., 521  
 Gianinazzi-Pearson, V., 521  
 Gibeau, D. M., 91  
 Gibian, M. J., 155  
 Gidoni, D., 436  
 Giersch, C., 137  
 Giese, H., 227, 234, 235  
 Gifford, R. M., 84  
 Gilboa-Garber, N., 654, 655  
 Giles, D., 174  
 Gilissen, L. J. W., 213  
 Gill, D. M., 399, 415  
 Gillespie, D. T., 680  
 Gillespie, J., 535  
 Gillet, C., 104, 106, 109  
 Gilli, G., 82  
 Gilmartin, P., 436  
 Gilmartin, P. M., 435-37  
 Gilmore, A. M., 332  
 Gilmour, S. J., 582  
 Gilroy, S., 468  
 Gimpler, H., 70  
 Giordani, R., 117  
 Giovannoni, J. J., 633, 663, 681, 684, 690-92  
 Girard-Bancou, J., 289  
 Giraudat, J., 541, 695  
 Girvin, M. E., 168  
 Giuliano, G., 425, 429, 435, 436, 608, 609  
 Glaczinski, H., 593, 595, 599, 601, 603  
 Glad, G., 493  
 Glass, N. L., 543  
 Glaudemans, C. P. J., 80, 81  
 Glazer, A. N., 298, 429  
 Gleason, M. L., 34  
 Gleaves, M. F., 439  
 Glenn, A. R., 384  
 Glick, R. E., 328  
 Glode, L. M., 415  
 Gloudemans, T., 508, 511, 512, 517, 518  
 Gnanam, A., 606  
 Goss, G., 380, 384  
 Godal, T., 581, 602  
 Goebel, K., 274  
 Goebel, K. von, 560, 572  
 Goekjian, V., 612  
 Goethe, J. W., 242, 267  
 Goff, L. J., 196  
 Goff, S. A., 206, 207, 215  
 Gogarten, J. P., 106, 107  
 Goldberg, M. L., 394, 399, 401-3, 413, 626  
 Goldberg, R., 120  
 Goldberg, R. B., 399, 401, 416, 626, 628, 631, 632, 634, 635, 638, 641  
 Goldman, A., 161  
 Goldmann, S. L., 211  
 Golds, T. J., 213  
 Goldstein, A. H., 168  
 Goldstein, J. L., 36, 490  
 Goliber, T. E., 66  
 Gollan, T., 57, 59, 63, 64, 68-70  
 Gollin, D. J., 510, 653, 659  
 Goloubinoff, P., 442, 592  
 Golumbeski, G. S., 39  
 Gombos, Z., 177, 468, 475, 478  
 Gonnet, P., 38  
 Gonsalves, D., 695  
 Gontero, B., 473  
 Gonzalez, N. S., 89  
 Gonzalez-Pascual, B., 227, 230, 232, 233, 235  
 Gonzalez-Reyes, A., 243, 257, 262  
 Goodchild, D. J., 292, 297, 429  
 Goodman, H. M., 425, 543  
 Goodwin, P. B., 107  
 Goping, I. S., 593, 594, 596  
 Gordon, A. J., 95, 376, 377  
 Gordon, M. P., 211, 542  
 Gordon-Kamm, W. J., 214  
 Gorin, P. J. A., 572  
 Gorton, H. L., 355  
 Götz, A., 211  
 Goto, K., 356  
 Gott, B., 82  
 Gottesman, M. E., 589  
 Gottschalk, W., 248  
 Goudriaan, J., 378  
 Govers, F., 374, 386, 508, 512, 513, 517  
 Govindjee, 322, 326  
 Gow, N. A. R., 113  
 Gowing, D. J., 57, 58, 62, 67  
 Goyvaerts, E., 436, 437  
 Grab, D., 666  
 Gracz, H., 81  
 Gradmann, D., 111-14  
 Gradziel, T., 214  
 Graham, J., 695  
 Graham, P. H., 384  
 Grambow, H. J., 177  
 Granell, A., 425  
 Grant, G. T., 104, 105  
 Grantz, D. A., 57, 68  
 Gratton, E., 322  
 Graves, A. C. F., 211  
 Gray, J. C., 299, 425, 683  
 Gray, J. E., 634  
 Gray, W. R., 228, 229  
 Green, B. R., 444, 445  
 Green, P. B., 257, 623  
 Green, P. J., 435-37, 446, 447  
 Green, T. G. A., 557, 558, 562, 564, 565, 573  
 Greene, B. A., 328, 444  
 Greenhalgh, G. N., 559, 566  
 Greenwood, J. S., 24, 34, 43, 608, 609  
 Greer, D. H., 335, 337, 340  
 Gresshoff, P. M., 374, 376, 377, 384, 385, 508, 520, 521  
 Greulich, K. O., 221  
 Grierson, D., 543, 546, 630, 631, 676, 683-87, 689, 690, 693, 695  
 Griffing, L. R., 36, 37, 41  
 Griffith, S. M., 374, 383, 384, 386, 514, 516, 520, 521  
 Griffiths, G., 36, 492, 493  
 Griffiths, W. T., 425, 427-29, 483  
 GRIGNON, C., 103-28; 104, 106, 108-10, 114-16, 668  
 Grill, E., 469, 478  
 Grimm, B., 425, 429, 442, 593, 595, 601  
 Grimm, R., 449  
 Grimmet, M., 365  
 Grimsley, N. H., 211, 212  
 Grimsen, M. Q. J. M. van, 438  
 Grisebach, H., 668  
 Groat, R. G., 514  
 Grob, U., 435  
 Große, H., 134  
 Gronenborn, A. M., 230, 231  
 Gronenborn, B., 212, 217  
 Gronwald, J. W., 472  
 Groot, S. P. C., 532, 533  
 Gross, A., 132, 133, 135, 136  
 Gross, D., 80, 93  
 Gross, K. C., 677, 679-81, 688, 690  
 Grosse, H., 134  
 Grossman, A., 443  
 Grossman, R., 302  
 Grossman, S., 146-48, 154-57, 166, 175, 177, 178  
 Groudine, M., 439  
 Gruissem, W., 363, 364, 425, 426, 429, 435, 438, 442, 643  
 Grumet, R., 695  
 Grun, F., 354  
 Grun, P., 401  
 Grunberger, D., 158-62  
 Grunenberg, B., 520  
 Grunwaldt, G., 108  
 Grusak, M. A., 108, 110, 111  
 Gualde, N., 157  
 Gueissaz, M. B., 120  
 Guenther, J. E., 321, 326, 328, 329, 337  
 Guerbet, F., 484  
 Guern, J., 110, 536, 538  
 Guerra, D. J., 473, 487  
 Guggino, S. E., 357  
 Guikema, J. A., 606

- Guilford, W. J., 563  
 Guilfoyle, T., 538  
 Guillemain, J. P., 521  
 Guilley, H., 693  
 Guitinan, M. J., 426  
 Guitton, C., 282, 283, 301  
 Gulline, H. F., 354, 355, 361  
 Gunne, H., 164, 165, 180  
 Gunstone, F. D., 490  
 Guo, Y., 448  
 Guri, A., 695  
 Gurley, W. B., 580, 581, 593-96, 598, 599, 612  
 Gurr, M. I., 469  
 Guss, P. L., 170  
 Gustafsson, Å., 270  
 Gutteridge, J. M. C., 668  
 Guy, C. L., 582, 585  
 Guy, R. D., 382, 383, 385  
 Guzman, P., 533, 535, 536  
 Gwynne, H., 472, 496
- H**
- Haagen-Smit, A. J., 173  
 Haas, B., 27  
 Habets, M. E., 209, 217, 218, 220  
 Habricot, Y., 532  
 Hack, E., 591  
 Hadley, P., 376  
 Hadwiger, L., 652, 654  
 Haehnel, W., 314, 317, 323  
 Hageman, J., 440  
 Hagemann, R., 190, 432  
 Hagiwara, S., 536  
 Hague, A., 330, 331, 333, 334, 338  
 Hahlbrock, K., 425, 427, 428, 434-36, 667  
 Hahn, M. G., 652, 656, 657, 664, 665  
 Hahne, G., 657  
 Hajela, R. K., 582  
 Hajibagheri, M. A., 103  
 Hakura, A., 227, 232, 233  
 Halaban, R., 355, 357  
 Halang, W., 146  
 Hale, W. S., 228  
 Haley, B. E., 303  
 Hall, A. E., 57  
 Hall, B., 685  
 Hall, C. B., 688  
 Hall, J. L., 103, 119, 360, 535  
 Hall, K. C., 68  
 Hall, M. A., 80, 81  
 Hall, T. C., 41, 43  
 Hallberg, M., 133  
 Hallberg, R. L., 590-92  
 Hallick, R. B., 426  
 Halliwell, B., 668  
 Halverston, L. J., 508, 510  
 Hamazaki, Y., 485  
 Hamberg, M., 147  
 Hamelin, J., 380, 384  
 Hamer, P. J. C., 57  
 Hamilton, A. J., 543, 546, 693  
 Hamilton, D. A., 401, 626, 629, 630  
 Hamilton, I. D., 300  
 Hamilton, R. H., 540  
 Hamilton-Kemp, T. R., 148, 164, 165, 168, 169, 171, 174, 176, 178  
 Hamm, H., 449, 450  
 Hammond, S. A., 402  
 Hammer, K. C., 355, 364  
 Hanada, N., 94  
 Handa, A. K., 23, 676, 683, 684, 689  
 Hanhart, C. J., 243, 533  
 Hansen, A. P., 376, 377  
 Hanson, D. D., 401, 626, 629, 630  
 Hanson, K. R., 303  
 Hansson, Ö., 315  
 Hara-Nishimura, I., 23, 30  
 Harbinson, J., 333, 338  
 Harborne, J. B., 628  
 Hardie, D. G., 470, 473  
 Harding, J., 472, 496  
 Harding, S. E., 680, 681, 687  
 Hardman, L. L., 383  
 Hardwick, K. G., 31  
 Hardy, R. W. F., 374  
 Harel, E., 443  
 Harford, J. B., 438  
 Haring, V., 394, 402, 634  
 Harker, C. L., 639, 640  
 Harkins, K. R., 432, 691  
 Harlan, J. R., 219  
 Harley, S. M., 36, 41  
 Harper, J. E., 375  
 Harper, J. F., 27  
 Harpster, M. H., 425  
 Harriman, R. W., 676  
 Harrington, H. M., 582, 606  
 Harris, L. M., 442, 593, 595, 599, 607  
 Harris, N., 23  
 Harris, P. J. C., 357, 362, 402, 677, 679  
 Harris, T. H., 227, 228, 232  
 Harrison, M. A., 63  
 Harrison, P. A., 78, 80, 81, 86, 93  
 Harrod, G., 193, 196  
 Harte, C., 243  
 Hartl, F.-U., 590, 591  
 Hartman, S. A., 632, 639  
 Hartmann, E., 27  
 Hartung, W., 62-64, 67-70, 110, 111  
 Hartwig, U., 379  
 Harvey, D. M. R., 119  
 Harwood, J. L., 469, 473  
 Hase, T., 228, 231  
 Hasegawa, P. M., 23  
 Hasilik, A., 38, 39  
 Haskell, D. W., 200, 585  
 Hassell, S. A., 375  
 Hastings, J. W., 352-54, 356, 357  
 Hatanaka, A., 170, 171  
 Hatch, M. D., 136-38, 300  
 Hatfield, J. L., 607  
 Hatfield, R., 687  
 Hattori, T., 44, 558, 668, 669  
 Hauber, I., 511  
 Haug, G. W., 248, 252  
 Häuser, I., 428, 441  
 Hauska, G., 291  
 Hausknecht, E. C., 148, 149  
 Havelka, U. D., 374  
 Hawes, C. R., 24  
 Hawksworth, D. L., 554, 555, 561, 565  
 Haworth, P., 298  
 Hawthorne, L. R., 608  
 Hayashi, K., 170, 171  
 Hayashi, T., 660, 662, 663, 677, 678, 687  
 Hayes, R., 365  
 Haynes, R. J., 104, 121  
 Hearst, J. E., 541  
 Heber, U., 95, 130, 138, 139, 302, 332, 338  
 Heberle-Bors, E., 219  
 Hedrich, R., 113, 380  
 Heemskerk, J. W. M., 470, 475, 487  
 Heeringa, G. H., 451  
 HEICHEL, G. H., 373-92; 375-77, 383, 385, 515  
 Heide, O. M., 364, 366  
 Heil, W. G., 295  
 Heilmeyer, H., 67, 70  
 Hein, M. B., 542-45  
 Heineke, D., 138  
 Heino, P., 535  
 Heinsteins, P. F., 666, 667  
 Heinz, E., 470, 471, 475, 478, 484, 486, 487  
 Heizmann, P., 199  
 Helder, R. J., 115  
 HELDT, H. W., 129-44; 94, 130, 132-40, 302  
 Helenius, A., 23, 29, 31  
 Helfferich, F., 108, 109  
 Helgeson, J. P., 659  
 Heller, R., 110  
 Hellmund, D., 580, 581  
 Hellyer, A., 470, 472, 473, 479, 491, 496  
 Helm, J., 248  
 Helm, K., 609  
 Helm, K. W., 593, 594, 596, 597, 601, 608, 609  
 Helsop-Harrison, J., 635



- Hemberg, T., 540  
 Hemenway, C., 693  
 Hemmingsen, S. M., 442, 443, 590, 592  
 Henderlong, P. R., 84  
 Hendershot, L. M., 30  
 Hendricks, S. B., 358, 362, 364, 365, 424  
 Hendrickson, W. A., 164, 230, 231  
 Hendrix, D. L., 68, 69, 110, 111  
 Hendrix, J. E., 84  
 Hendry, G., 78, 96  
 Henriksen, G. H., 111  
 Henry, S. H., 479  
 Henrysson, T., 288  
 Hensgens, L. A. M., 219  
 Henslow, G., 255  
 Henson, C. A., 92, 374, 377, 382, 383, 386  
 Hensen, A., 558  
 Hepler, P. K., 112, 448  
 Herdenberger, F., 625, 632  
 Herdt, E., 400  
 Herman, E. M., 26, 28, 32, 34, 35, 38, 43  
 Herman, P. L., 541  
 Hermann, R., 291  
 Hermodson, M., 158, 162, 164, 165  
 Hermalsteens, J. P., 211  
 Hernandez, L. F., 257  
 Hernandez-Lucas, C., 227-30, 232  
 Herrada, G., 384  
 Herrera-Estrella, L., 425, 435  
 Herrin, D. L., 440  
 Herrmann, R. G., 135  
 Hershey, H. P., 359, 428, 430, 438, 451  
 Hershko, A., 581, 582, 605  
 Herth, W., 200, 511  
 Hertwig, P., 262  
 Heslop-Harrison, J., 196, 197, 257, 258, 266, 394, 395, 397, 398, 400, 409  
 Heslop-Harrison, Y., 196, 197, 397, 400  
 Hess, D., 218, 219  
 Hesse, T., 31, 536, 543  
 Hetherington, A. M., 56  
 Heupel, R., 138  
 Heuser, M. A., 602, 603  
 Hiatt, W. R., 683-86, 689, 693-95  
 Hickey, E., 610  
 Hicks, G. R., 534, 538  
 Hicks, G. S., 257, 258, 399  
 Hidaka, H., 97  
 Hiebsch, C., 146  
 Higgins, T. J. V., 26, 30, 33, 43  
 Higgins, V. J., 177, 668  
 Higgs, K. H., 57  
 Highland, E., 158-62  
 Hildebrand, D. F., 147, 148, 150, 151, 156, 157, 164, 165, 168-72, 174, 176, 178, 180, 477, 479, 484, 489  
 Hilditch, T. P., 474, 490  
 Hilhorst, H. W. M., 533  
 Hill, B. L., 586  
 Hill, D. J., 557-59, 562, 565, 568, 569, 573  
 Hill, J. P., 399  
 Hillier, C., 227, 234, 235  
 Hillman, W. S., 357, 364, 428  
 Hillmer, S., 36  
 Hinata, K., 213, 395, 401, 404, 405, 413  
 Hinchee, M. A. W., 210, 214, 401, 542, 544, 545, 625, 630  
 Hind, G., 282, 287, 291, 296  
 Hinton, D. M., 688  
 Hinz, G., 140, 302, 443  
 Hirayama, M., 97  
 Hird, S. M., 299  
 Hirel, B., 514, 515  
 Hirsch, A. M., 510, 512, 518  
 Hirsch, P. R., 376  
 Hirsch, R., 70  
 Hirst, E. L., 78, 79  
 Hitz, W. D., 470, 474, 479, 491  
 Ho, L. C., 84  
 Ho, T.-H. D., 588, 593, 595, 599, 601, 605, 606, 608  
 Hoben, P. J., 600  
 Hobson, G. E., 680, 681, 683, 687-90  
 Hoch, M., 475  
 Hochachka, P. W., 382, 384, 385  
 Hochman, J., 297  
 Hodges, M., 295, 298, 320, 322, 328, 330, 336, 338  
 Hoekema, A., 35  
 Hoffman, L. M., 32, 34, 43, 514, 518  
 Hoffman, N. E., 167, 284, 425, 429, 535, 540, 676  
 Hoffmann, C., 668  
 Hoffmann, N. L., 542, 544, 545  
 Hoffmans-Hohn, M., 355  
 Hofmann, H., 140  
 Hofsteenge, J. F., 38, 45  
 Höfte, H., 27, 517  
 Hoge, J. H. C., 635  
 Hoggart, R., 394, 399, 402, 626, 642  
 Hoglund, S., 492, 493  
 Hohn, B., 212  
 Hohn, T., 212, 213  
 Hoj, P. B., 472, 473  
 Holaway, B. L., 626  
 Holder, N., 257  
 Holdsworth, M. J., 676, 683  
 Holland, R., 469, 470, 492, 493  
 Hollingsworth, R. L., 510  
 Holman, R. T., 145, 149  
 Holmes, K. C., 587  
 Holmes, M. G., 359, 360  
 Holmes, N. G., 297, 299  
 Holmes, S., 581, 589  
 Holmgren, A., 233  
 Holtan-Hartwig, J., 558  
 Holtum, J. A. M., 133  
 Holzwarth, A. R., 295, 314, 317-23, 328, 331, 334  
 Homann, P. H., 328  
 Hombé, F., 104  
 HONEGGER, R., 553-78, 554, 559, 562, 566, 568, 572  
 Hong, A., 380, 383, 384  
 Hong, Y.-N., 493  
 Hood, L., 408, 627  
 Hooft van Huijsduijnen, R. A. M., 45  
 Hoog, J.-O., 158, 159, 162  
 Hooykaas, P. J. J., 206, 210, 211, 510  
 Hooykaas-VanSlogteren, G. M. S., 211  
 Hope, A. B., 105, 109  
 Hopley, J., 429  
 Horgan, R., 530, 532, 542, 544-46  
 Hori, H., 33, 38  
 Horn, M. A., 666  
 Horner, F., 107  
 Horner, H. T., 395, 400  
 Horsch, R. B., 206, 210, 401, 542, 544, 545, 691  
 Horsey, A. K., 382  
 Horton, P., 287, 293, 295, 296, 298, 329-34, 338, 339, 341  
 Horton, R. F., 66  
 Horvath, B., 508, 512, 513  
 Horvath, D. P., 582  
 Horvitz, R. H., 243  
 Horwich, A. L., 591  
 Horwitz, B., 429-31  
 Hoshiko, S., 160  
 Hoshizaki, T., 355  
 Hostak, M. S., 377  
 Hou, K.-W., 145  
 Houck, C., 684  
 Hough, T., 191, 193-98  
 House, C. M., 137  
 Housley, T. L., 79, 80, 84-86, 89-91, 93  
 Howald, I., 40, 42  
 Howarth, C., 608, 610  
 Howarth, W. N., 79

- Howell, N., 166  
 Howell, S. H., 284  
 Howitz, K. T., 132, 138  
 Howlett, B. J., 400  
 Hoyer-Hansen, G., 444  
 Hracky, R., 302  
 Hsiao, T. C., 56, 60  
 Hsu, D., 676  
 Hsu, M.-Y., 430  
 Hu, C., 33, 38  
 Hu, S.-Y., 191  
 Huang, A. H. C., 492, 493  
 Huang, L. K., 336, 444  
 Huang, Y. Y., 63  
 Huart, R., 218  
 Huber, D. J., 653, 662, 676, 679, 683, 690  
 Huber, R., 164, 165  
 Huber, S., 94, 96  
 Huber, S. C., 133, 139  
 Huber, W., 66  
 Hubert, P., 298  
 Hubick, K. T., 63  
 Hucklesby, D. P., 134  
 Hudson, A., 243  
 Hugly, S., 469, 476, 477, 486-88  
 Huguet, T., 510, 512, 517, 518, 520  
 Huijser, P., 242, 248, 252, 253, 256, 260, 261, 263, 394, 627, 643, 644, 646  
 Humbeck, C., 384, 517  
 Hunt, C., 584  
 Hunt, D., 35  
 Hunt, D. F., 282-84, 286, 290  
 Hunt, S., 374, 378, 379  
 Hunter, C. P., 39, 40, 42  
 Hurkman, W. J., 24  
 Hurtle, S. M., 23, 29, 31  
 Huss, B., 542  
 Hussein, E. H. A., 30  
 Huynh, Q. K., 227, 232  
 Huystee, R. B. V., 33, 38  
 Hwang, C. H., 610  
 Hwang, S.-M., 158, 161  
 Hyde, D. R., 627  
 Hymowitz, T., 150, 151, 169, 170, 180
- I
- Iacomini, M., 572  
 Ichihara, K., 492  
 Ichihara, S., 44  
 Ida, S., 170, 171  
 Idler, K. B., 359  
 Igasaki, S., 120  
 Ikediobi, C. O., 178  
 Ikeuchi, M., 299  
 Imai, Y., 250  
 Iman, S. H., 35  
 Imbault, P., 284
- Incoll, L., 67, 68  
 Incoll, L. D., 82, 84  
 Ines-Minguez, M., 376, 379  
 Ingham, P. W., 243, 258, 267  
 Ingolia, T. D., 598  
 Inohara, N., 31, 543  
 Inoue, Y., 299  
 In'T Veld, P., 382, 383  
 Inzé, D., 542, 627  
 Joerger, T. R., 402  
 Irish, V. F., 255  
 Irvine, R. F., 448  
 Isaacs, S. T., 541  
 Isawa, T., 78  
 Ishii, S., 657  
 Ishizaki, O., 485  
 Ishizuka, J., 377, 383, 385  
 Ish-Shalom, D., 593, 595, 601, 604  
 Islam, K., 293, 294  
 Isogai, A., 404-6  
 Itai, C., 67  
 Ito, Y., 657  
 Itoh, S., 322  
 Itoh-Andoh, M., 94  
 Iurriaga, G., 26  
 Iversen, T. H., 534  
 Ivin, P. C., 81, 93  
 Iyer, V. N., 215  
 Izawa, M., 89  
 Izawa, T., 213  
 Izumi, T., 164, 165, 180
- J
- Jabben, M., 359, 360, 365, 366, 426, 442  
 Jachetta, J. J., 111  
 Jack, T., 254, 255, 257, 260  
 Jackowski, S., 473  
 Jacks, T. J., 492, 493  
 Jackson, J. F., 401  
 Jackson, M. B., 62, 68  
 Jacobs, F., 514, 515  
 Jacobs, F. A., 518  
 Jacobs, J. B., 570  
 Jacobs, J. D., 284  
 Jacobs, M., 110, 111, 117, 118, 218, 508, 535, 538, 660  
 Jacobs, T. W., 510  
 Jacobsen, E., 374, 376  
 Jacobsen, K., 520  
 Jacoby, B., 177  
 Jaffe, L. F., 110, 116  
 Jaffe, M. J., 360  
 Jager, J. W. H., 608  
 Jahn, W., 402  
 Jahn, H. M., 554, 557, 568, 570, 572  
 James, A. T., 469  
 James, D. J., 695  
 James, D. W., 483
- James, E., 380  
 James, P. W., 558  
 Jamieson, G. R., 471  
 Jamil, H., 479  
 Janetzki, S., 158, 164, 165  
 Jarrell, W. M., 104, 106  
 Jarvis, M. C., 104, 120  
 Jasheway, D. W., 167  
 Jaspers, P. A. P., 451  
 Jaworski, J. G., 473, 474  
 Jayawardene, A. L., 229  
 Jeffcoat, B., 70, 72  
 Jefferson, R. A., 26, 432, 639  
 Jefford, T. G., 78, 79, 86, 88-91, 93, 94  
 Jeffrey, G. A., 82  
 Jenkins, C. L. D., 385  
 Jenkins, G., 427, 429, 433, 435  
 Jenkins, G. I., 426, 434  
 Jenkins, M. E., 425  
 Jennings, H. J., 80, 81  
 Jennings, R. C., 293  
 Jensen, E. Ø., 519, 520  
 Jensen, L. C. W., 257  
 Jensen, M., 565  
 Jergil, B., 295  
 Jewer, P. C., 67, 68  
 Findal, K. K., 540  
 Joachim, S., 36  
 Jochems, B. U., 516  
 Johanninger, U., 284  
 John, M., 510  
 Johnson, C. B., 360  
 Johnson, C. H., 353, 357  
 Johnson, G., 488  
 Johnson, K. A., 110  
 Johnson, K. D., 27, 28, 37, 517  
 Johnson, L. M., 39, 40  
 Johnson, M. C., 174  
 Johnson, S. C., 652, 668  
 Johnson, T. C., 233  
 Johnson, A., 354  
 Johnston, R. N., 610  
 Johri, M. M., 395  
 Joliot, A., 320, 325  
 Joliot, P., 320, 325  
 Jonard, G., 693  
 Jones, A. M., 360, 438, 450, 534, 538  
 Jones, B. L., 228-32  
 Jones, E. W., 40  
 Jones, H. G., 57-60, 62, 66, 67, 69, 72  
 Jones, J. D. G., 540  
 Jones, K. H., 196, 197  
 Jones, M. G. K., 220  
 Jones, M. W., 292  
 Jones, O. T. G., 483  
 Jones, R. B., 41  
 Jones, R. E., 158, 161, 164  
 Jones, R. L., 23, 36, 601, 608  
 Jones, T., 84-86

- Jones, W. N., 274  
 Jongejan, J. A., 155, 159  
 Jonker, R., 510, 511  
 Jonsson, L., 497  
 Joo, F., 468  
 Jordan, B. R., 359, 429  
 Jordon, D. C., 384  
 Jorgensen, B. B., 490  
 Jorgensen, J. E., 519, 520  
 Jorgensen, R., 414  
 Joma, M. L., 532, 534  
 Jorvall, H., 158, 159, 162  
 Josserand, S., 335, 429  
 Joy, K., 384, 385  
 Joyard, J., 130, 470, 475, 476, 478, 479, 483  
 Jung, K. H., 475  
 Junge, W., 298  
 Jursinic, P. A., 298  
 Justin, A. M., 482
- K**
- Kabsch, W., 587  
 Kachar, B., 511  
 Kacperska, A., 167  
 Kacperska-Palacz, A., 171, 174  
 Kader, J. C., 483, 484  
 Kado, C., 212  
 Kagamiyama, H., 227-29  
 Kagan, H. M., 155  
 Kagawa, T., 472  
 Kahl, G., 206, 209-11  
 Kahn, M. L., 374, 378, 384, 385  
 Kaiser, G., 95  
 Kaizuma, N., 148, 150, 158, 180  
 Kaji, H., 511  
 Kajiwara, T., 170, 171  
 Kakiuchi, N., 688  
 Kalosakas, K., 445  
 Kalousek, F., 590  
 Kamalay, J. C., 628  
 Kamboj, R. K., 401  
 Kammer, A. E., 230, 232  
 Kanabus, J., 79, 80, 86, 89, 91, 93  
 Kanai, R., 138, 139  
 Kanaya, K. I., 81  
 Kanbara, T., 406  
 Kandasamy, M. K., 23, 401, 403, 405, 409, 410, 642, 643  
 Kang, M. S., 679  
 Kang, P.-J., 589  
 Kaniewski, W. K., 693  
 Kannangara, C., 484  
 Kannenberg, E. L., 517  
 Kanno, T., 395  
 Kanofsky, J. R., 150  
 Kano-Murakami, Y., 436  
 Kanwar, Y. S., 302
- Kao, T.-H., 394, 399, 401-3, 413, 626  
 Kape, R., 517  
 Kaplan, D., 230  
 Kaplan, H. A., 30  
 Kappen, L., 553, 554, 558, 566, 570, 571  
 Kar, M., 175  
 Kargman, S., 158, 161, 164  
 Karlin-Neuman, G. A., 425, 430  
 Karlsson, H. G., 354  
 Karni, L., 177, 178  
 Karpus, M., 230, 231  
 Karr, D. B., 383  
 Karssen, C. M., 531-34, 537, 540  
 Kartha, K. K., 695  
 Kasemir, H., 443, 444  
 Kashimoto, T., 227, 232  
 Kastler, M., 219  
 Katagiri, F., 512  
 Katagiri, H., 380, 383, 384  
 Katerji, N., 67  
 Kates, D. S., 683, 684, 689, 691  
 Katinakis, P., 517, 518  
 Kato, J., 174  
 Katoh, S., 444  
 Katsumi, M., 532  
 Katsura, N., 359  
 Kauffman, S., 658  
 Kauffmann, S., 45  
 Kaufman, L. S., 425, 426, 429-31, 434, 438, 439, 446, 447, 449, 450  
 Kaul, M. L. H., 400  
 Kaul, R., 283, 301  
 Kaulen, H., 436  
 Kauppinen, S., 470  
 Kausch, A. P., 435  
 Kaushal, G. P., 37  
 Kaus, H., 652, 668  
 Kavanagh, T. A., 432  
 Kawai, S., 382, 383  
 Kawakami, N., 425  
 Kay, A. S., 428, 429  
 Kay, S. A., 363, 364, 425, 427, 429, 430, 435-37, 451  
 Kayser, B., 31, 543  
 Kazarinova-Fukshansky, N., 361  
 Kearny, J. F., 30  
 Koebke, F., 274  
 Keegstra, K., 135, 137, 139, 140, 282, 301-3, 440, 442, 443, 475, 581, 582, 589, 600, 677, 678  
 Keen, J. N., 290, 630, 631, 685, 686  
 Kehoe, D., 425  
 Keifer, D. W., 108, 116  
 Keigl, P. J., 608  
 Keith, B., 363, 364, 427, 451
- Kekwick, R. G. O., 470  
 Keller, E. R. J., 104, 106  
 Keller, F., 80, 81, 86, 88, 93  
 Keller, J. M., 451  
 Kellmann, J. W., 429  
 Kelly, A., 636  
 Kelly, M. O., 534, 538  
 Kelly, R. B., 34, 35  
 Kelly, T. J., 249  
 Kemp, J. D., 43  
 Kende, H., 67, 168, 533, 535, 536, 539  
 Kendrick, R. E., 425, 427, 428, 433, 446, 450, 451  
 Kennedy, E. P., 494  
 Kennedy, R. A., 382  
 Kenny, J. W., 470, 474  
 Kent, B., 119  
 Kenworthy, W. J., 377  
 Keppler, L. D., 176  
 Kerr, E., 689  
 Kerr, L. B., 608  
 Kerr, P., 94, 96  
 Kerschner, M. W., 693  
 Kershaw, K. A., 572, 573  
 Kettemann, I., 70  
 Keuper, H. J. K., 319-22  
 Key, J. L., 442, 580-82, 593, 595-99, 602-7, 609, 610, 612  
 Khairallah, L., 113  
 Khey-Pour, A., 401, 402  
 Khursheed, B., 605  
 Kieboom, A. P. G., 93  
 Kijne, J. W., 382, 383, 510, 511  
 Kikkawa, U., 290  
 Kilian, E., 561, 562, 564, 565, 568  
 Kim, J., 681  
 Kim, K. H., 472  
 Kim, K. S., 679  
 Kim, S. D., 679  
 Kim, W. T., 24  
 Kimelman, D., 693  
 Kimpel, J. A., 580-82, 593, 596, 597, 602, 603, 605, 607, 609, 612  
 Kindl, H., 668, 669  
 King, B. J., 379, 383, 514, 515  
 King, D., 166  
 King, P. J., 211, 530, 532, 533  
 King, R. W., 64, 65, 70, 359, 365, 366  
 Kinnback, A., 517  
 Kinney, A. J., 470, 474, 479, 481, 491  
 Kipnis, T., 335, 337, 340  
 Kirch, H. H., 401  
 Kirchgessner, T. G., 161, 178  
 Kirchhoff, L. V., 581, 582, 589  
 Kirven, K. A., 688  
 Kiser, J., 691

- Kishimoto, A., 290  
 Kislev, N., 687  
 Kitamura, K., 148, 150, 151,  
 158, 170, 180  
 Kitou, M., 381, 385  
 Kittsteiner, U., 426  
 Kjertrup, S. E., 32  
 Klaas, M., 428, 441  
 Klämbt, D., 110, 538  
 Klanner, A., 27  
 Klassen, L. W., 230, 232  
 Klausner, S. F., 174  
 Klausner, R. D., 438  
 Kleckner, N., 693  
 KLEE, H., 529-51; 206, 543,  
 545  
 Klee, H. J., 206, 210, 542,  
 544, 545  
 Klein, A., 625, 632  
 Klein, B. P., 166  
 Klein, P. G., 430, 441, 443  
 Klein, R. R., 430, 441, 443,  
 607  
 Klein, T. M., 206, 207, 214,  
 215, 640  
 Kleinhofs, A., 227, 234  
 Klemm, M., 262  
 Klenz, J. E., 252  
 Kleppinger-Sparace, K. F., 476  
 Klessig, D. F., 440, 441  
 Klevanik, A. V., 321, 322, 338  
 Klimov, V. V., 321, 322, 336,  
 338  
 Klionsky, D. J., 39-41  
 Kloppstech, K., 363, 364, 425,  
 429, 442, 444, 593, 599,  
 601, 603, 604  
 Klug, D. R., 322  
 Klughammer, Ch., 330  
 Knapp, J., 683, 684, 689  
 Knapp, J. E., 683, 686, 687,  
 695  
 Knapp, P. H., 365  
 Knee, M., 120, 676, 677, 681,  
 682, 689  
 Kneen, B. E., 520, 521  
 Kneigt, E., 684  
 Knofel, H. D., 174, 176  
 Knox, B., 193-95, 197  
 Knox, J. P., 64, 517  
 Knox, R. B., 190, 191, 193-99,  
 394, 395, 399, 400, 415  
 Ko, K., 425, 429  
 Kobayashi, K., 686  
 Kobayashi, Y., 338  
 Kobiler, D., 177, 178  
 Kobiler, I., 177, 178  
 Koch, B. D., 586  
 Koch, J. L., 686  
 Kochian, L. V., 108, 110, 111  
 Koes, R. E., 425, 628, 632,  
 638, 639  
 Kohn, R., 666  
 Kohn, K., 582, 583, 588  
 Kohn, T., 511  
 Kohorn, B. D., 443  
 Kohorn, J. P., 443  
 Koike, H., 299  
 Kolatukudy, P. E., 496  
 Kolbowski, J., 330  
 Koltunow, A. M., 626, 631,  
 632, 634, 635, 638, 641  
 Komaki, M. K., 252  
 Komaromy, M. C., 161  
 Komeda, Y., 593, 596  
 Koncz, C., 542  
 Kondo, T., 357, 362  
 Konforti, B. B., 586, 587  
 König, J., 566  
 Konopa, J., 233  
 Kool, A. J., 438  
 Koornneef, M., 243, 446, 450,  
 451, 531-34, 537, 540  
 Kopp, M., 655  
 Koren, E., 198  
 Kornfeld, S., 23, 32, 39  
 Koski, A. J., 84  
 Köster, S., 336  
 Kosuge, T., 543  
 Kotoujansky, A., 630  
 Kouchi, H., 377, 380, 382-85,  
 517  
 Kozutsumi, Y., 582, 583, 588  
 Kramell, H. M., 174  
 Kramell, R., 174, 176  
 Kramer, D., 106  
 Kramer, J., 581, 589  
 Kramer, K. J., 230, 232  
 Kramer, M., 695  
 Kramer, M. K., 683, 684, 689,  
 693, 694  
 Kramer, P. J., 56, 61, 70  
 Kranz, D., 668, 669  
 Kranz, E., 201  
 Krasnovsky, A. A., 321, 322,  
 338  
 Kraus, J., 374, 378, 384, 385  
 KRAUSE, G. H., 313-49; 314,  
 323, 328-32, 334-36, 338-  
 41  
 Kreis, M., 27  
 Kreuz, K., 441  
 Kridl, J. C., 470, 474  
 Kriedemann, P. E., 64  
 Krieger, A., 333, 340, 341  
 Krishnan, H. B., 24, 517  
 Krishnan, M., 606, 610  
 Krishnasamy, S., 606  
 Kroa, B. A., 166, 179  
 Krochko, J. E., 572, 573  
 Kroh, M., 399  
 Krol, A. R. van der, 414  
 Krömer, S., 138  
 Krotzky, A., 521  
 Kruse, E., 593, 601  
 Kruse, L. I., 155  
 Kuang, T.-Y., 295  
 Kubacka-Zebalska, M., 167,  
 171, 174  
 Kuc, J., 652  
 Kucey, B. L., 610  
 Kühbauch, W., 80, 81, 84  
 Kühlbrandt, W., 297  
 Kühnl, T., 493  
 Kuckuck, H., 248, 249, 271,  
 273, 274  
 Kuehl, W. M., 628  
 Kuehn, M., 695  
 Kuhad, M. S., 377  
 Kuhle, A., 520  
 Kuhlmeier, C., 435-37, 512  
 Kuhn, D. N., 425, 470  
 Kuhn, H., 146, 147, 151, 159,  
 167, 172, 175  
 Kuhn, M., 336  
 Kulaveva, O. N., 67  
 Kumar, A., 695  
 Kumar, V., 244, 268  
 Kumon, K., 110, 111, 114  
 Kunst, L., 252, 469, 476, 477,  
 486, 488  
 Kuntz, M., 625, 632  
 Kuo, T. M., 473  
 Kurzel, B., 94  
 Kutny, R. M., 283, 300  
 Kutschera, U., 66, 118, 119  
 Kwack, B. H., 192, 193, 196  
 Kyle, D. J., 293, 295, 298, 336  
 Kyte, J., 162, 163  
  
 L  
 Laasch, H., 331, 332, 335,  
 336, 338, 339  
 Laasko, S., 147, 154  
 Labavitch, J. M., 662, 676,  
 677, 680, 681, 688, 690  
 Labovitz, J., 563  
 Lachno, D. R., 63  
 Lacka, E., 533  
 Lackey, G. D., 681  
 LaFayette, P. R., 604  
 Laffray, D., 113  
 Lafitte, C., 657, 660  
 Lafontaine, P. J., 382, 383  
 Lafreniere, C., 382, 383  
 Lagarias, J., 449  
 Laidlaw, R. A., 80  
 Laine, A.-C., 38  
 Laing, W. A., 335, 337, 340,  
 383, 441  
 Lalonde, B., 402, 405  
 Lalonde, B. A., 405-7  
 Lam, E., 429, 436, 437, 446-48  
 Lamb, C. J., 176, 177, 432,  
 508, 510, 639  
 Lambers, H., 374, 376, 378  
 Lambert, A.-M., 511  
 Lambert, H., 610

- Lambert, K., 612  
 Lamerichs, R. M. J. N., 229  
 Lamport, D. T. A., 677  
 Lamppu, G. K., 443  
 Lance, C., 159, 168, 382, 384  
 Lander, E. S., 541, 695  
 Landry, J., 610  
 Landsmann, J., 374, 519  
 Lane, R. A., 652  
 Lang, V., 535  
 Lange, O. L., 557, 561, 562, 564, 565, 568, 570, 571  
 Lansing, A., 221  
 LARA, M., 507-28; 512, 514, 515  
 Larabell, S. K., 401, 630, 633, 682  
 Largeau, C., 563  
 Larher, F., 380, 384  
 Larkins, B. A., 24  
 Larkum, A. W. D., 106  
 LaRoche, J., 284  
 LaRossa, R. A., 590  
 Larsen, K., 516  
 Larson, D. W., 553, 554, 557, 559, 566, 570  
 Larsson, C., 133  
 Larsson, K., 84  
 Larsson, U. K., 288, 293, 295, 297  
 LaRue, T. A., 374, 378, 382, 383, 385, 520, 521  
 Lashbrook, C. C., 681, 691, 692  
 Lasslett, Y., 686  
 Lassner, M., 691  
 Last, D., 425  
 Laszity, R., 228, 229  
 Laties, G. G., 676, 688, 695  
 Latzko, E., 133  
 Laughnan, J. R., 400  
 Laurière, C., 37  
 Laurière, M., 37  
 Laursen, N. B., 520  
 Lauterbach, P., 441, 443  
 Lauwereys, M., 42  
 Lauzon, L. M., 442, 583, 585, 593, 594, 596, 599, 603, 604, 607-9  
 Laval-Martin, D., 356  
 Lavergne, J., 326  
 Lavorel, J., 314  
 Law, D. M., 540  
 Lawn, R. M., 161, 178  
 Lawrence, M. C., 34  
 Leyzell, D. B., 374, 375, 377-79, 383, 514, 515  
 Lea, P. J., 514  
 Learner, A., 79  
 Leatherbarrow, R. J., 155  
 Lechowicz, M. J., 572  
 Lechtenberg, D., 332, 333, 338, 340, 341  
 Lecomte, J. T. J., 230  
 Ledoux, L., 218  
 Lee, A. S., 584  
 Lee, C. B., 331  
 Lee, C.-H., 318, 322, 328, 331  
 Lee, E., 676, 683, 690  
 Lee, P., 293, 295, 296, 298  
 Lee, R. Y., 26  
 Lee, S. W., 679  
 Lee, W. M. F., 587  
 Lee, Y., 110, 111, 114  
 Leegood, R. C., 296, 338  
 Leemans, J., 416, 641  
 Le Fay, J., 429  
 Lefebvre, D. D., 110  
 Lefebvre, J., 109  
 Legg, C. S., 148, 164, 165, 168, 169, 171, 174, 176, 178  
 Legocki, A. B., 512  
 Legocki, R. P., 517  
 Le Gouallec, J. L., 331, 337  
 Legrand, M., 45  
 Lehen, E. A., 355  
 Lehmann, J., 174  
 Lehner, K., 136, 137  
 Leibowitz, M. E., 174  
 Leigh, R. A., 111, 119  
 Lemaire, C., 289  
 Lemieux, B., 483, 489  
 Lemieux, C., 414  
 Lemire, B. D., 490  
 Lemoine, Y., 335  
 Lending, C. R., 24  
 Lennarz, W. J., 30  
 Lenting, P. E., 693  
 Lenton, J. R., 542, 546  
 Leonard, O. A., 377  
 Leonard, R. T., 109  
 Leonard, S. J., 682  
 Leopold, A. C., 64, 539  
 Lerbs, W., 174  
 Lerner, D. R., 44  
 Lerouge, P., 508, 510, 513, 660  
 LeRudulier, D., 380, 384  
 Leshem, Y. Y., 175  
 Lessire, R., 482  
 Letesson, J.-J., 104, 655  
 Leung, S., 470  
 Leustek, T., 581, 582, 589  
 Levitan, I., 432  
 Levy, M. A., 602, 603  
 Lewis, D. H., 96, 395, 397, 398, 554, 572  
 Lewis, E. B., 257  
 Lewis, L. N., 687, 695  
 Lewis, M. J., 31  
 Leydecker, M.-T., 363, 425, 429  
 Li, H., 448  
 Li, J., 213  
 Liberek, K., 583, 589, 590  
 Lica, L., 542  
 Lichtenthaler, H. K., 314, 323, 342  
 Lidfors, B., 193  
 Liebenberg, N. V. D. W., 24  
 Lieberman, M., 167, 659  
 Liebisch, H. W., 174  
 Liedvogel, B., 472  
 Lifschitz, E., 625, 626, 644  
 Lightfoot, D. A., 508  
 Lilley, G. G., 30  
 Lillo, C., 363  
 Lim, E., 540  
 Lin, C.-Y., 580, 597, 602, 605, 606, 610  
 Lin, L.-S., 677, 678  
 Lin, W., 110  
 Lin, Z.-F., 291  
 Lincoln, C., 534, 535, 539  
 Lincoln, J. E., 662, 676, 683, 684, 689-91  
 Linden, J. C., 84  
 Lindgren, J. A., 146, 147, 167, 172, 176  
 Lindner, W. A., 668  
 Lindquist, S. L., 580, 582, 583, 585, 587, 593, 598, 602, 605, 606, 609, 610  
 Lindsey, K., 220  
 Lindstedt, S., 165  
 Liners, F., 104, 655  
 Lines, C. E. M., 565, 573  
 Lingelbach, K., 600  
 Link, G., 432  
 Link, T. A., 135  
 Linmaeus, C., 270, 271  
 Linskens, H. F., 399  
 Linthorst, H. J. M., 24, 44, 45  
 Lipscomb, J. D., 165  
 Lis, J. T., 434  
 Lissemore, J. L., 359, 427, 428, 430, 434, 438, 439, 445, 447  
 Lister, R. M., 148, 156  
 L'Italien, J. J., 228, 229, 231, 232  
 Liu, C., 158, 162, 165  
 Llewellyn, D. J., 43, 520  
 Llinas, M., 229, 230  
 Lloyd, C. W., 243, 511  
 Lloyd, J. C., 425  
 Lobel, P., 39  
 Logan, A. S., 120  
 Lokhorst, G. M., 565  
 Lomax, T. L., 534, 538  
 Loneragan, T. A., 356, 357  
 Long, D. M., 425  
 Long, S. R., 508, 510, 512  
 Long, Z., 284  
 Longstaff, M., 425  
 Lönnig, W.-E., 242, 256, 250, 261, 263, 394, 627, 643, 644, 646

- Lonsdale, D. M., 400  
 Lookhart, G. L., 228  
 Loos, W. D. B., 541, 695  
 Lopez-Casillas, F., 472  
 Lopez-Juez, E., 451  
 Lorcher, L., 362  
 Lord, E. M., 395, 399, 638  
 Lorenz, O. A., 111  
 Lorenzoni, C., 610  
 Lorimer, G. H., 442, 590, 592  
 Lörz, H., 201, 219, 657, 695  
 Lösch, R., 566  
 LoSchiavo, F., 608, 609  
 Lotan, T., 399, 635, 636, 658  
 Lottspeich, F., 135, 401  
 Loughmann, B. C., 384, 385  
 Loveys, B. R., 64, 66, 67, 69  
 Low, P. S., 666, 667  
 Lowen, C. Z., 111, 113  
 Lubben, T. H., 442, 590, 592  
 Lucas, W. J., 36, 95, 108, 110, 111, 115, 116, 221  
 Lucero, H. A., 287, 291, 300, 301  
 Luckow, V. A., 41  
 Ludlow, M. M., 57  
 Ludwig, S. R., 264  
 Lagtenberg, B. J. J., 508, 510  
 Luh, B. S., 682, 684  
 Lullien, V., 517  
 LUMSDEN, P. J., 351-71; 357, 358, 360, 364, 365  
 Lund, M., 636  
 Lund, P., 26  
 Luo, X., 472  
 Luo, Z. X., 219  
 Lupu, R., 175, 177  
 Lürsen, K., 111  
 Lush, W. M., 402  
 Lusia, A. L., 161, 178  
 Luskey, K. L., 490  
 Luton, M. T., 57  
 Löttge, U., 103, 106, 111  
 Lycett, G. W., 543, 546, 693  
 Lynch, D. V., 175, 468, 489  
 Lyndon, R. F., 261  
 Lynen, F., 137  
 Lynn, D. G., 508  
 Lytleton, P., 384  
  
**M**  
 Ma, H., 242, 256, 394, 541, 643  
 Ma, R., 655  
 Ma, Y., 150, 157  
 MacAlpine, G., 683, 684  
 Maccarrone, M., 155  
 MacDonald, E. M., 542  
 Macdowall, F. D. H., 377, 382  
 MacFarlane, J. D., 572, 573  
 Mache, R., 282, 283, 301  
 Machold, O., 444  
 Macias, A., 243, 257, 262  
 Mack, A. J., 147, 156, 168, 170, 174, 175  
 MacKintosh, R. W., 470, 473  
 Macko, V., 170  
 MacIachlan, G., 661, 662, 678  
 MacIachlan, G. A., 661, 687  
 MacLeod, A. M., 84  
 Macol, L. A., 512  
 Maddox, J. M., 691  
 Madore, M. A., 95, 110, 221  
 Maeda, K., 84  
 Maenhaut, R., 435  
 Mäenpää, P., 328, 334, 336  
 Maeshima, M., 44  
 Maher, E. P., 534, 535, 539  
 Mahon, J. D., 375, 376  
 Mai, W., 228  
 Maillet, F., 508, 510, 513, 660  
 Maine, G. T., 256  
 Mak, A. S., 228-30  
 Makkie, M., 38  
 Makus, D. J., 652, 654, 668  
 Maliga, P., 193, 196  
 Malik, N. S. A., 508, 512, 517  
 Malik, R. S., 68  
 Malik, V. S., 435-37  
 Malkin, S., 294, 315, 323  
 Malkiney, R., 532  
 Malmberg, R. L., 626  
 Malmstrom, B. G., 152  
 Malovany, H., 166  
 Mamada, K., 299  
 Mancinelli, A. L., 428  
 Mandak, V., 213  
 Mandoli, D., 430  
 Mangano, M. L., 214  
 Mangelsdorf, A. J., 397  
 Mannan, R. M., 606  
 Mannherz, H. G., 587  
 Manning, G. S., 105  
 Mansfield, M. A., 38, 44, 593, 602, 603  
 Mansfield, T. A., 56, 64, 66, 362  
 Manshardt, R. M., 695  
 Mansson, P. E., 676  
 Manteuffel, R., 583, 587  
 Manzara, T., 435, 442  
 Mapleston, R. E., 428  
 Marana, C., 227  
 Marchessault, R., 82  
 Marcker, A., 520  
 Marcker, K. A., 518-20  
 Marcus, A., 518  
 Marfa, V., 659, 660  
 Mariani, C., 416, 641  
 Mariotti, D., 542  
 Marks, M. D., 256, 541  
 Markwell, J., 292  
 Marmé, D., 360, 511  
 Marmioli, N., 610  
 MARRE, E., 1-20; 111  
 Marre, M. T., 111  
 Marrs, K. A., 425, 426, 438, 447  
 Marschner, H., 110, 115, 116  
 Marsden, M. P. F., 677, 678  
 Marshall, J. S., 442, 581, 582, 589  
 Marshall, L. C., 472  
 Marsolier, M. C., 515  
 Martel, R., 592  
 Martin, B., 481  
 Martin, C., 263, 265, 639, 640, 643  
 Martin, E. S., 357  
 Martin, J., 590  
 Martin, W., 355  
 Martindale, S. J. B., 534, 539  
 Martinell, B. J., 214, 216  
 Martinez, E., 510  
 Martinez-Zapater, J., 252  
 Martinoia, E., 227, 229, 234  
 Maruo, B., 558  
 Mascarenhas, D., 213  
 Mascarenhas, J. P., 190, 199, 395, 399-401, 607-9, 626, 629, 630, 633  
 Masia, A., 62, 63  
 Masle, A., 61  
 Mason, H. S., 66, 441  
 Masters, M. T., 242, 251, 271, 274  
 Masterson, C. L., 375  
 Matem, U., 668  
 Mathews, A., 521  
 Mathews, L. S., 415  
 Mathis, P., 293  
 Matile, Ph., 90, 95, 96  
 Matson, G. B., 384  
 Matsubara, H., 228, 231, 232  
 Matsuda, K., 56  
 Matsuda, S. P. T., 153  
 Matsui, K., 170, 171  
 Matsumoto, T., 158-60, 162  
 Matsuo, M., 44, 444  
 Matthes, U., 570  
 Matthes-Sears, U., 566  
 Matthew, J. B., 297  
 Matthijs, H. C. P., 299  
 Matthys-Rochon, E., 193-98  
 Mattoo, A. K., 659  
 Matzke, A. J. M., 414  
 Matzke, M. A., 414  
 Mau, S.-L., 394, 399, 401, 402, 626, 642  
 Mauch, F., 45  
 Maunders, M. J., 676, 683, 689  
 Mauro, V. P., 517, 518  
 Maxwell, C. A., 383, 385  
 Maxwell, F., 415  
 Maxwell, I. H., 415  
 Mayer, A., 45  
 Mayer, J. E., 667  
 Mayer, M. G., 668, 669



- Mayer, W.-E., 104, 106, 110, 111  
 Mayes, S. R., 299  
 Mayfield, S. P., 425, 432  
 Mayor, G., 110, 116  
 Mazer, J. A., 228, 229, 231, 232  
 Mazliak, P., 482  
 M'Bina, I., 299  
 McCabe, D. E., 214, 216  
 McCarty, D. R., 537, 538  
 McCarty, R. E., 132, 138  
 McCauley, S. W., 318, 319  
 McClure, B. A., 394, 402, 538, 634  
 McColl, J. G., 105, 106  
 McCollum, T. G., 679  
 McConchie, C., 193-95, 197  
 McConchie, C. A., 191  
 McCormick, S., 200, 399, 401, 583, 585, 609, 625, 626, 629, 630, 633, 636, 640, 641, 682, 691  
 McCorquodale, H., 84  
 McCourt, P., 469, 476, 484, 486  
 McCurdy, D. W., 445, 448  
 McDaniel, R. G., 168  
 McDermott, T. R., 384  
 McDonald, E. J., 78, 79  
 McDonnell, R. E., 210, 214  
 McDougall, G., 661, 662  
 McDougall, G. J., 678  
 McElwain, E., 593, 594  
 McFadden, G. I., 23, 402, 412  
 McFadden, J. J., 536, 652  
 McFeeters, R. F., 682  
 McGlasson, W. B., 663, 676, 681, 683, 684, 689, 690, 692  
 McGrath, D., 84  
 McHale, N. A., 303  
 McHughen, A., 257  
 McIntosh, L., 159, 168  
 McKay, D. B., 586, 587  
 McKay, I. A., 384  
 McKeating, J., 37  
 McKee, K. L., 382  
 McKeon, T. A., 474, 475, 484  
 McLaughlin, S., 298  
 McLean, B. G., 632  
 McMann, M. C., 678, 679, 687  
 McManus, M. T., 37  
 McManus, T. T., 471, 472, 476  
 McMichael, B. L., 103  
 McMichael, R., 449  
 McMullin, T., 590  
 McMurchie, E. J., 692  
 McMurray, L., 353  
 McNeil, D. L., 374  
 McNeil, M., 653, 664, 677  
 McNemar, T. B., 152, 159  
 McNicol, R. J., 695  
 McRae, D. G., 384, 385  
 Meagher, R. B., 434, 438, 632  
 Means, A. R., 511  
 Mecklenburg, K., 627  
 Medcalf, D. G., 81  
 Mederski, H. J., 375  
 Medford, J. I., 542, 544, 545  
 Meeks-Wagner, D. R., 635  
 Meidner, H., 63, 357  
 Meier, H., 78, 79, 81  
 Meijer, E. G. M., 219  
 Meins, F., 45  
 Meins, J., 38, 45  
 Meinzer, F. C., 57, 68  
 Mekada, E., 415  
 Melchers, L. S., 510  
 Meldrum, S. K., 683, 690  
 Melis, A., 293, 298, 299, 320, 321, 324, 326, 328, 329, 334-37, 429, 442  
 Melis, M., 695  
 Mellman, I., 23, 39  
 Mellor, R. B., 517, 521  
 Mellstrand, S. T., 229  
 Melton, D., 693  
 Melzer, E., 383, 385  
 Memelink, J., 435, 635  
 Memon, A. R., 449  
 Menaker, M., 355  
 Mendelssohn, I. A., 382  
 Menegus, F., 382, 385  
 Merhoff, R., 84  
 Merkle, T., 446, 447  
 Mermod, N., 249  
 Merrill, C. R., 89  
 Mersey, B. G., 36  
 Mertens, R., 535, 652  
 Messens, E., 542  
 Mettler, I. J., 213  
 Metzger, A. L., 166, 179  
 Metzger, P., 563  
 Meyer, A., 174, 176, 332, 335  
 Meyer, G., 442, 599, 603  
 Meyer, H. E., 299, 363, 429  
 Meyer, V., 251, 252, 255  
 Meyerowitz, E. M., 242-44, 247, 252, 254-58, 260-62, 266, 268, 394, 540, 541, 627, 643-45, 695  
 Miao, G.-H., 515  
 Michaels, A., 440  
 Michalowicz, G., 113  
 Michel, H., 164, 165, 282, 283, 286, 288-92, 442  
 Michel, H. P., 282, 283, 286, 290  
 Michelen, V. A., 56, 60  
 Midland, S. L., 177  
 Mierle, G., 107  
 Miernyk, J. A., 472  
 Miersch, O., 174, 176  
 Mifflin, B. J., 514  
 Mikami, B., 170, 171  
 Miki, K., 164, 165  
 Miki, L. A., 215  
 Miki-Hirosige, H., 197  
 Mikkelsen, J. D., 472  
 Milarski, K. L., 587  
 Milborrow, B. V., 66  
 Miller, C., 429  
 Miller, C. O., 539, 546  
 Miller, J. G., 677, 678  
 Miller, M. G., 168  
 Miller, P. A., 290  
 Miller, R. W., 384, 385  
 Miller, S. S., 374, 376, 383, 386, 514, 515, 520, 521  
 Milligan, S., 688  
 Millner, P. A., 287, 288, 297  
 Milos, P. M., 356, 442, 590, 592  
 Mimuro, M., 322  
 Minamisawa, K., 380, 383, 384  
 Minchin, F. R., 374, 376, 378-80, 382  
 Minis, D., 352, 356, 357  
 Mino, Y., 84, 92  
 Miquel, M., 478, 483, 487, 489  
 Mirza, J. L., 534, 535  
 Mishkind, M. L., 442, 443, 599, 606  
 Misra, L. M., 582, 583, 588  
 Mitchell, D. F., 377  
 Mitchell, P. J., 643  
 Miyaji, M., 511  
 Miyata, S., 33  
 Mizzzen, L. A., 581, 582, 586, 589, 610  
 Moehle, C. M., 41  
 Moerman, M., 511, 512, 513  
 Moerschbacher, B., 177  
 Mogen, K., 444  
 Mogensen, H. L., 191, 192, 197, 198, 395  
 Mohnen, D., 659, 660  
 Mohr, H., 170, 171, 425-28, 431-33, 443, 444, 446  
 Moisyadi, S., 606  
 Mol, J. N. M., 414, 425, 628, 632, 638, 639  
 Molgaard, H. V., 439  
 Moloney, A. H. M., 374, 378  
 Moloshok, T. D., 652, 665, 666  
 Mommsen, T. P., 382, 384, 385  
 Monajembashi, S., 221  
 Monroe, J. D., 378  
 Monroe, M., 442, 590, 592  
 Montagu, M. V., 24, 44  
 Montezinos, D., 107  
 Montillet, J. L., 657, 660  
 Montreuil, J., 29  
 Moonan, F., 541, 695  
 Moore, H. M., 405, 410, 642



- Moore, T. S., 470, 479, 481, 482  
 Moquin-Tandon, A., 242, 251  
 Morata, G., 243, 257, 262  
 Morch, M. D., 484  
 Moreau, R., 497  
 Moreaux, T., 363  
 Morell, M., 516  
 Morelli, G., 435  
 Mori, S., 382, 383  
 Morikawa, H., 120  
 Morimoto, R. I., 580, 584, 587, 612  
 Morishige, D. T., 443, 444  
 Morissey, P. J., 328  
 Morita, Y., 170, 171  
 Morocz, S., 213  
 Moroni, A., 111  
 Morrell, C. K., 104  
 Morris, C., 430  
 Morris, E. R., 104, 105  
 Morris, P. C., 663, 681, 690, 693, 694  
 Morris, R. O., 531  
 Morrish, F., 214  
 Morrison, N. A., 516, 517  
 Morrison, S. L., 384  
 Morrissey, P. J., 321, 326, 328, 329  
 Morse, D., 356  
 Morse, M. J., 363, 448, 482, 652  
 Morvan, C., 104-6, 109  
 Moser, I., 361  
 Moshrefi, M., 684  
 Möisinger, E., 425, 426, 428, 430, 434, 438  
 Mosquera, L. A., 593, 596, 598  
 Moss, D. A., 332  
 Moss, D. N., 84  
 Mould, R. M., 515  
 Moureau, P., 683-85, 691  
 Moureaux, T., 425, 429  
 Moustakas, A.-M., 117  
 Moya, I., 295, 314, 317, 320, 322  
 Moyssset, L., 362  
 Müntz, K., 23  
 Muchmore, C. R., 166, 179  
 Muchow, R. C., 57  
 Mudd, J. B., 471, 472, 476, 488  
 Mudd, S. H., 480, 481  
 Mueller, M., 318, 319  
 Muesch, A., 27  
 Mukerji, I., 324  
 Mukherjee, K. D., 493  
 Mulcahy, D. L., 395  
 Mulcahy, G. B., 395  
 Mulkey, T. J., 110, 116  
 Mullen, R. E., 608  
 Müller, E., 104, 106  
 Müller, J.-F., 538  
 Müller, M., 213, 220  
 Muller, M., 70  
 Mullet, J. E., 66, 283, 284, 290, 292, 430, 438, 441, 443, 607  
 Mulligan, B. J., 206  
 Mullineaux, C. W., 299  
 Muncie, L., 27  
 Mundy, J., 484  
 Munns, R., 59, 64, 65, 70  
 Muñoz, R., 117  
 Munro, S., 31, 582, 588  
 Munsche, D., 587  
 Munting, A. J., 399  
 Mur, L. A., 414, 632, 639  
 Mur, L. R., 299  
 Murata, N., 314, 324, 468, 475, 478, 482, 484, 485  
 Murfet, I. C., 248, 532, 534  
 Murgia, M., 191  
 Murphy, D. J., 282, 286, 287, 292, 493  
 Murphy, G., 242, 249, 250, 258, 267  
 Murphy, P. M., 375  
 Murphy, T. M., 384  
 Murty, Y. S., 244, 268  
 Mustafa, A. S., 581, 602  
 Mutschler, M. A., 691, 695  
 Myers, A. M., 590, 592  
 Myers, J., 295  
 N  
 Nacken, W., 248, 252, 253, 256, 261  
 Nagahashi, G., 104, 109  
 Nagao, R. T., 580, 581, 593, 595-99, 602-5, 607, 609, 612  
 Nagata, R., 153  
 Nagatani, A., 359, 360, 363, 364, 426, 427, 433, 451  
 Nagy, F., 363, 429, 430, 435-37  
 Nagy, J. I., 193, 196  
 Najid, A., 170  
 Nakagawa, H., 689, 690  
 Nakagawa, T., 44  
 Nakaji, K., 377, 383, 385  
 Nakajima, N., 120  
 Nakamoto, H., 300  
 Nakamura, K., 44  
 Nakamura, M., 89  
 Nakamura, S., 197  
 Nakanishi, T., 227, 228, 232, 233  
 Nam, H.-G., 541, 695  
 Nanba, O., 322  
 Nanda, K. K., 364  
 Nap, J. P., 374, 386, 508, 512, 514, 517, 518  
 Napier, R. M., 360  
 Napoli, C., 414  
 Nari, J., 117  
 Nash, T. H., 566  
 NASRALLAH, J. B., 393-422; 23, 40, 190, 198, 394, 399, 401-7, 409, 410, 413, 414  
 NASRALLAH, M. E., 393-422; 23, 190, 198, 394, 399, 401-5, 407, 409, 410, 413, 414, 626, 634, 642, 643  
 Navaratnam, S., 152, 164  
 Neale, A. D., 636  
 Neale, P. J., 335, 336  
 Neales, T. F., 62, 63  
 Nchushai, R., 282, 442, 443  
 Nedbal, L., 336, 338  
 Neer, E. J., 448, 449  
 Negru, I., 213  
 Nehra, N. S., 695  
 Neidermeyer, J., 691  
 Neill, S. J., 532  
 Neimann, S., 332  
 Nelson, C. J., 78, 80, 81, 85  
 Nelson, J. M., 94  
 Nelson, N., 284, 287  
 Nelson, O. E., 248  
 Nelson, T., 425  
 Nemson, J. A., 328, 329, 430  
 Nerland, A. H., 581, 602  
 Nester, E. W., 211, 542, 543  
 Nettancourt, D., 394, 397, 408  
 Neubauer, C., 327, 330, 333, 338, 341  
 Neuburger, M., 479  
 Neuffer, M. G., 243, 266, 541  
 Neuhaus, G., 206, 215  
 Neuhaus, H. E., 133  
 Neuhaus, J., 38, 45  
 Neumann, D., 580, 581, 583, 587, 589, 593, 594, 602  
 Neupert, W., 589, 591  
 Neven, L. G., 585  
 Nevins, D. J., 686, 687  
 Newbigin, E. J., 43  
 Newcomb, W., 511  
 Newell, C. A., 210, 214  
 Newell, K. D., 375  
 Newman, I. A., 108, 110, 111  
 Ngerpratsitsiri, J., 140  
 Nguyen, D., 284, 425  
 Nguyen, H. T., 610  
 Nguyen, J., 515  
 Nguyen, T., 516-18  
 Nichols, B. W., 469  
 Nichols, R., 689, 690  
 Nickels, R. L., 159, 168  
 Nickerson, N. H., 248, 266  
 Nielsen, E. A., 627  
 Nielsen, H. C., 228  
 Nielsen, J. E., 194-96

- Nielsen, N. C., 30, 148, 150, 151, 156-58, 170, 180  
 Nieto-Sotelo, J., 593, 595, 599, 606  
 Nikolau, B. J., 440  
 Nilan, R. A., 243  
 Nilges, M., 213, 230, 231  
 Nimmo, G. A., 300, 363  
 Nimmo, H. G., 300, 363  
 Ninnemann, H., 358  
 Nishida, I., 468, 470, 484, 485  
 Nishimura, K., 511  
 Nishimura, M., 23, 30  
 Nishino, E., 252  
 NISHIO, T., 393-422; 401, 413  
 Nishizuka, Y., 290  
 Njus, D., 352  
 Noat, G., 117  
 Noctor, G., 332, 333, 341  
 Noctor, G. D., 333  
 Noiva, R., 30  
 Nonami, H., 57, 66, 111, 119  
 Nooden, L. D., 539  
 Norby, R. J., 375  
 Nordeen, R., 543  
 Nordin, K., 535  
 Nordlund, P., 164, 165  
 Norman, C., 256  
 Norman, H. A., 477-79, 484, 489  
 Normington, K., 582, 583, 588  
 Norris, J. H., 512  
 Norris, J. I. L., 512  
 Norris, K. H., 424  
 Nösberger, J., 84, 379  
 Novacky, A., 176  
 Nover, L., 580-83, 587, 589, 593, 594, 602, 612  
 Nugteren, D. H., 146  
 Nuijs, A. M., 323  
 Nukaya, A., 688  
 Nultsch, W., 317  
 O  
 Oaks, A., 425  
 Obaton, M., 374  
 Obendorf, R. L., 168  
 O'Brien, E. M., 148, 149  
 Ocampo, C. A., 177  
 O'Carroll, C., 593, 608, 609  
 Ochoa, S., 137  
 Ockendon, D. J., 397, 401  
 O'Connell, M. A., 610  
 O'Donnell, P. J., 290  
 Oelmüller, R., 425, 427, 428, 430, 432, 433, 450  
 Oelze-Karow, H., 170, 171, 444  
 Oetiker, J., 532, 533  
 O'Farrell, P. H., 263  
 Ögren, E., 293, 335  
 Ögren, W. L., 137  
 Ogunkanmi, A. B., 64  
 Ogura, N., 689, 690  
 Ohad, I., 288, 289, 291, 292, 296, 298, 442, 599, 603, 604  
 O'Hearne-Robers, E. G., 450  
 Ohl, S., 425, 427, 428  
 Ohlrogge, J. B., 468, 470, 471, 473, 474, 479, 487, 496  
 Ohme, K., 587  
 Ohnishi, J., 133, 138, 139  
 Ohta, H., 170, 171  
 Ohta, Y., 219, 668, 669  
 Ohtani, S., 227-29  
 Ojima, K., 78  
 Okada, K., 252, 470, 485  
 Okada, T., 227-29  
 Okada, Y., 415  
 Okasaki, K., 413  
 Okita, T. W., 24  
 Okong'o-Ogola, O., 196, 197  
 Okuley, J. J., 402, 412  
 Olden, K., 33  
 O'Leary, M. H., 383, 385  
 Olesen, P., 194-96  
 Olive, J., 299  
 Oliver, J. E., 520  
 Oliver, R. P., 428, 429  
 Olivera, B. M., 230, 235  
 Olsen, G. M., 534  
 Olsen, L. J., 282, 301, 302, 442, 443, 600  
 Olmes, S., 36  
 Olson, T., 229, 231  
 Olsson, J. E., 521  
 O'Neill, E. A., 249  
 Oo, K. C., 493  
 Ooms, G., 542, 546  
 Oosterhoff-Teertstra, R., 425  
 Oota, Y., 357  
 Opella, S. J., 563  
 O'Prey, J., 158, 164, 165  
 Öquist, G., 293, 335  
 Ori, N., 399, 635, 636  
 Ormisher, J., 496  
 Orsso, J. W., 221  
 Orpin, T., 23, 402, 412  
 Ort, D. R., 326  
 Ortega, J. L., 515, 517, 519  
 Osborne, D. J., 37, 689  
 Osmond, C. B., 137, 336  
 Ossenberg-Neuhaus, K., 110, 116  
 Ostergaard, J. E., 520  
 Ostermann, J., 589, 591  
 Osteryoung, K. W., 685, 686  
 Otsuki, T., 153  
 Ott, S., 566, 570  
 Ottaviano, E., 199  
 Otten, L., 542  
 Ottersbach, P., 425, 429, 442, 593, 595, 601  
 Otto, B., 425, 429, 442, 593  
 Otto, V., 445, 448  
 Ougham, H. J., 582, 610  
 Outlaw, W. R. Jr., 380  
 Owens, G. C., 292, 296, 298  
 Owens, L., 544  
 Owens, R., 211  
 Owens, T. G., 378  
 Osborough, K., 332, 333, 339  
 Ozaki, Y., 228, 232  
 P  
 Pacha, R. F., 212  
 Packham, N. K., 298  
 Paddock, E. F., 248  
 Padilla, J., 514, 516, 517, 519  
 PADILLA, J. E., 507-28; 512, 514  
 Pages, M., 157  
 Pai, E. F., 587  
 Pain, D., 302  
 Palacios, R., 510  
 Palade, G. E., 23  
 Palazzolo, M. J., 627  
 Palevitz, B. A., 112  
 Paliyath, G., 175, 176  
 Palmer, A., 80  
 Palmer, G., 149  
 Palmer, G. R., 379  
 Palmer, J. H., 257  
 Palmiter, R. D., 415  
 Palmi, L. M., 546  
 Palva, E. T., 535  
 Palsys, J., 691  
 Pandey, K. K., 410  
 Paolillo, D. J., 23, 401, 403, 405, 410, 642, 643  
 Papageorgiou, G., 314  
 Papavassiliou, A. G., 589  
 Pape, H., 242, 256, 260, 261, 263, 394, 627, 643, 644, 646  
 Pape, M. E., 472  
 Pappenfuss, H. D., 364  
 Pappenheimer, A. M., 399, 415  
 Paraska, J. R., 364  
 Parbery, D. G., 115  
 Parent, J. B., 33  
 Parham, P., 586  
 Park, I. K., 84  
 Park, R. B., 360  
 Park, T. K., 150, 156, 169, 174  
 Park, Y. J., 82  
 Parker, C. S., 612  
 Parker, L. L., 68  
 Parker, M. L., 24  
 Parker, M. W., 358, 365  
 Parker, W. B., 472  
 Parkhurst, D. F., 103  
 Parkin, J., 251  
 Parks, B. M., 450, 451

- Parry, A. D., 532  
 Parsley, K. R., 689  
 Parthier, B., 174, 580, 587,  
 589, 593, 594, 602  
 Partis, M. D., 359, 429  
 Passay, A. J., 695  
 Passioura, J. B., 59, 61, 70  
 Passmore, S., 256  
 Paszkowski, J., 206, 212, 213,  
 220  
 Patchett, B. J., 688  
 Pate, J. S., 376, 377  
 Patrick, K. E., 167  
 Patrick, W. H., 382  
 Patterson, M. E., 688  
 Paul, W. E., 627  
 Pauls, K. P., 175  
 Paulsen, G. M., 606  
 Paulsen, H., 426, 443  
 Paulus, F., 542  
 Pauze, E. J., 653-55  
 Pavlidis, T., 352, 354  
 Payne, G. S., 40  
 Paz, M. A., 155  
 Paz-Ares, J., 228, 229, 538  
 Pe, M. E., 401, 629  
 Peacock, W. J., 374, 380, 508,  
 519, 635  
 Pear, J., 684  
 Pearce, G. R., 84, 179, 652,  
 654, 665, 668  
 Pearcey, R. W., 489  
 Pearse, B. M. F., 36  
 Pearson, J., 683, 685, 686,  
 689  
 Peary, J. S., 175  
 Pedersen, T. J., 432, 439  
 Pederson, W. B., 382-85  
 Pedreño, M. A., 117  
 Pees, E., 508, 510  
 Peever, T. L., 177, 668  
 Peichulla, B., 284  
 Pelcher, L. E., 592  
 Pelech, S. L., 479  
 Peleman, J., 627  
 Pelham, H. R. B., 23, 29, 31,  
 39, 582, 586, 588, 601,  
 612  
 Pelissier, B., 177, 668  
 Pellow, C., 274  
 Pena-Cortes, H., 535, 652  
 Pence, M. K., 508  
 Penn, S. E., 359  
 Pennell, R. I., 198  
 Penswick, J. R., 212  
 Penzig, O., 242, 251, 273  
 Peracca, S., 563  
 PÉREZ, H., 507-28  
 Perotto, S., 517  
 Pesacreta, T. C., 36, 115  
 Pesis, E., 677, 687, 688  
 Peter, G. F., 442  
 Peterhans, A., 213  
 Peterman, T. K., 147, 148,  
 156, 157, 168, 170, 174,  
 175, 512, 514, 517  
 Peters, J. E., 228  
 Peters, J. L., 451  
 Peters, N. K., 445, 508  
 Petersen, N. S., 608, 609  
 Petersen, O. W., 36  
 Petersen, R. B., 605  
 Peterson, C. A., 115  
 Peterson, E. L., 358  
 Peterson, H., 70  
 Peterson, J. B., 374, 382, 515  
 Peterson, P. A., 538  
 Peterson, R. B., 333  
 Peterson, W., 70  
 Petersson, L., 152  
 Petit, A., 520  
 Petko, L., 602  
 Peto, C. A., 433, 451  
 Petruska, J., 213  
 Pettersson, B., 229  
 Pettiit, J. M., 401, 412, 634  
 Peumans, W. J., 30, 38, 44,  
 653, 654, 658  
 Peveling, E., 560, 562, 566  
 Peyritsch, J., 273  
 Pfanz, H., 110, 111  
 Pfeffer, S. R., 35  
 Pfister, K., 328  
 Pfündel, E., 335  
 Pharis, R. P., 63  
 Pharr, D. M., 688  
 Pheloung, P., 84  
 Philip-Hollingsworth, S., 510  
 Phillips, D. A., 374-76  
 Phinney, B. O., 531, 532  
 Piatigorsky, J., 593, 603  
 Picard, D., 605  
 Picaud, M., 328, 329, 331  
 Pichersky, E., 284, 425, 429,  
 435-37, 442  
 Pickard, B. G., 72  
 Pickett, F. B., 534, 535, 539  
 Picton, J. M., 395  
 Picton, S., 689, 690  
 Piechulla, B., 363, 364, 425,  
 426, 429  
 Pierce, D. A., 213  
 Pierce, M., 508  
 Pilet, P. E., 110, 116  
 Pilotti, A., 664  
 Pineda, M., 520  
 Pinsky, A., 146, 147, 155, 156,  
 166, 178  
 Pintor-Toro, J. A., 236  
 Pirrung, M. C., 167  
 Pistorius, E. K., 148-52, 154,  
 165  
 Pitas, J. W., 514, 518  
 Pitman, M. G., 106, 109  
 Pittendrigh, C. S., 352, 356,  
 357  
 Pitto, L., 608, 609  
 Platt-Aiolia, K. A., 109, 120,  
 677, 687  
 Piessl, A., 559, 565  
 Plijter, J. J., 323, 324  
 Pluijm, J. E. van der, 399  
 Plumb-Dhindsa, P. L., 175  
 Plumley, F. G., 443  
 Plumpton, C., 360  
 Polacco, J., 158, 165  
 Polacco, J. C., 150, 156, 157,  
 169, 174  
 Pollard, M. R., 492, 495, 496  
 Polle, A., 298  
 POLLOCK, C. J., 77-101; 56,  
 60, 78, 80, 81, 83-91, 93-  
 96  
 Pollock, R., 256  
 Pollock, R. A., 590  
 Pontis, H. G., 78, 88, 89, 91,  
 94, 96  
 Ponz, F., 176, 227-29  
 Poovaiah, B. W., 536, 652,  
 688  
 Popperl, H., 664  
 Poritz, M. A., 600  
 Porta, H., 514  
 Porter, G., 322  
 Portis, A. R. Jr., 301  
 Post-Beitenmiller, M. A., 474,  
 496  
 Postlethwaite, S. N., 248  
 Postlmayr, H. L., 682  
 POTRYKUS, I., 205-25; 206,  
 210-13, 220  
 Potts, W. C., 532, 534  
 Poulsen, C., 520  
 Powell, C. E., 376, 377  
 Powell, G. K., 542  
 Powers, M. J., 688  
 Prasad, T. K., 590, 591  
 Prat, R., 120  
 Prat, S., 535, 652  
 Pratt, H. K., 690  
 Pratt, L. H., 359, 433, 445,  
 448, 449, 451  
 Preaux, G., 401  
 Prehn, S., 27  
 Preiss, J., 96  
 Pressey, R., 653-55, 662, 663,  
 681, 682, 686, 688, 690  
 Presti, D. E., 427  
 Preston, C., 322  
 Preston, R. L., 107  
 Price, D., 517  
 Price, G. D., 108, 114, 384,  
 385  
 Primig, M., 414  
 Prince, T. A., 175  
 Prins, H. B. A., 115  
 Pritchard, J., 56, 60  
 Prome, J. C., 660  
 Proovost, E., 191

## 726 AUTHOR INDEX

- Proudlove, M. O., 136, 137, 139  
 Pruitt, R. E., 407  
 Prusky, D., 177, 178  
 Puoppke, S. G., 517, 518  
 Puppo, A., 384  
 Purton, M., 689  
 Puype, M., 31, 536, 543  
 Pythoud, F., 542
- Q**
- Qian, L., 429  
 Quaife, C. J., 415  
 Quail, P. H., 359-61, 426-28, 430, 434, 438, 439, 445, 447, 450, 451, 605, 606  
 Quarrie, S. A., 56, 66, 67  
 Quatrano, R. S., 256, 541  
 Quattrocchio, F., 638, 639  
 Que, L., 147, 165  
 Quick, P., 333  
 Quinn, G., 68  
 Quinn, P. J., 468  
 Quinmel, R. G., 384  
 Quinto, C., 512  
 Quisenberry, J. E., 103
- R**
- Racker, E., 287, 291  
 Racusen, R. H., 358, 360  
 Radicella, J. P., 207, 215  
 Radin, J. W., 62, 64, 68, 69, 110, 111  
 Radmark, O., 158-60, 162  
 Raghavan, V., 190, 200  
 Raikhel, N. V., 28, 33, 38, 43, 44, 686  
 Raineri, D. M., 211  
 Raines, C. A., 425  
 Raison, J. K., 486  
 Rajasekhar, V. K., 432  
 Raja, M. V. S., 111  
 Rakotoarisoa, Z., 147  
 Raiston, E., 540  
 Ramadoss, C. S., 149-51, 154, 165  
 Ramilo, C. A., 230, 235  
 Ramm, K., 27  
 Ramos, C., 212  
 Randall, D. D., 472  
 Randall, P. S., 26  
 Ranjeva, R., 282  
 Rapoport, S. M., 146, 147, 151, 159, 167, 172, 175  
 Rapoport, T. A., 27  
 Rapsch, S., 567, 568, 572  
 Raschke, E., 593, 594, 596, 598, 612  
 Raschke, K., 104, 106, 110, 112, 113, 342, 380  
 Rashka, K., 43  
 Raskin, I., 539  
 Rasmussen, R., 684  
 Rasmussen, U., 27  
 Ratajczak, R., 323  
 Ratcliffe, R. G., 384, 385, 565, 573  
 Ratet, P., 520  
 Raven, J. A., 63, 111, 114  
 Ravi, K., 33, 38  
 Rawsthorne, S., 376, 378, 383, 385  
 Ray, J. A., 676, 684-87, 689, 691, 693, 695  
 Ray, J. P., 67, 630, 631, 663  
 Ray, P. M., 111, 117, 118, 449, 535, 538, 660  
 Rayle, D. L., 118, 121, 534, 538  
 Read, E., 676, 689, 690  
 Read, N. D., 468  
 Reading, D. S., 590, 592  
 Rebeiz, C. A., 444  
 Rech, E. L., 206, 213  
 Reckmann, U., 113  
 Record, R. D., 36, 37  
 Reddi, P. S., 33, 38  
 Reddy, A. S. N., 536, 652  
 Redman, D. G., 228  
 Redway, F., 213  
 Rees, D. A., 104, 105, 331-33, 341  
 Rees, T. A. V., 565, 573  
 Reese, J. C., 655  
 Reese, T., 511  
 Reger, B. J., 682  
 Regier, D. A., 542  
 Reibach, P. H., 377, 383, 384  
 Reich, T. J., 215  
 Reichert, N. A., 43  
 Reid, D. M., 63, 175  
 Reid, E. H., 471  
 Reid, J. B., 248, 530, 532, 534  
 Reid, J. S. G., 78-81  
 Reid, R. J., 384, 385  
 Reijnen, W. H., 608  
 Reimann-Philipp, U., 227, 229, 234, 425  
 Reinhold, V. N., 512, 518  
 Reiss, H.-D., 200, 511  
 Reiss, T., 432  
 Remy, R., 402  
 Renger, G., 314, 342  
 Rennie, P. J., 36  
 Rensing, L., 354  
 Reporter, M., 511  
 Reuling, G., 537, 540  
 Revol, J. F., 82  
 Reynolds, P. H. S., 516  
 Reynolds, T. L., 200  
 Rhiel, E., 560  
 Rhoads, D. M., 168  
 Rhodes, C. A., 213  
 Rhodes, M. J. C., 676  
 Riabowol, K. T., 610  
 Riazi, A., 56  
 Ricard, J., 117, 473  
 Rice, D., 681, 693  
 Rice, H. V., 361  
 Richards, F. M., 297  
 Richards, K., 693  
 Richardson, D. H. S., 557-59, 565, 568, 569, 573  
 Richardson, J. M., 39  
 Richardson, T., 170  
 Richter, M., 336  
 Richter, O., 354  
 Rick, C. M., 243, 689, 691, 695  
 Rickett, H. W., 251  
 Ride, J. P., 654  
 Ridge, N., 684  
 Ridge, R. W., 515  
 Ridgway, N. D., 480, 481  
 Rieble, S., 361  
 Rieger, R., 580, 587, 589, 593, 594, 602  
 Riens, B., 138  
 Rieping, M., 612  
 Riesselmann, S., 363  
 Riezman, H., 40  
 Rigaud, J., 382, 384  
 Rigaud, M., 157  
 Riggle, B. D., 377  
 Rigoni, F., 285  
 Rimke, S., 562, 568, 571  
 Rinderle, U., 323  
 Ripoll, C., 105, 109  
 Ritcher, C., 104, 109  
 Ritchie, R. J., 106  
 Ritter, C. E., 45  
 Rivier, J., 230, 235  
 Robbins, D. J., 228, 232  
 Robbins, T. P., 243, 263, 265, 639, 640, 643  
 Roberto, F. F., 543  
 Roberts, D. M., 517  
 Roberts, D. P., 80, 81  
 Roberts, E. H., 376  
 Roberts, I. N., 193, 196, 397, 401  
 Roberts, J. A., 682  
 Roberts, J. K., 583, 584, 602, 605-7, 610  
 Roberts, K., 23, 678, 679, 687  
 Roberts, L. R., 425, 426, 431, 439, 446  
 Roberts, P., 496  
 Robertson, D. S., 532, 537, 538  
 Robertson, J. G., 384, 683, 690  
 Robertson, J. M., 63  
 Robertson, N. G., 676, 683, 684, 687  
 Robertson, R. N., 104, 105  
 Robichaud, C. S., 537  
 Robinson, C., 440

- Robinson, D. G., 23, 30, 36  
 Robinson, H. H., 298, 326  
 Robinson, J. S., 40  
 Robinson, M. P., 469  
 Robinson, M. S., 36  
 Robinson, P. M., 66  
 Robinson, R., 689  
 Robinson, S. P., 67, 69, 138, 140  
 Roby, D., 654  
 Rocha-Sosa, M., 24  
 Roche, P., 508, 510, 513, 660  
 Rocher, J.-P., 86, 92  
 Rochester, D. E., 583, 584  
 Rock, C. O., 473  
 Rodermel, S., 693  
 Rodriguez, J. G., 178  
 Rodriguez-Palenzuela, P., 227, 236  
 Roeckel, P., 193-95, 197, 198  
 Roelofs, T. A., 318, 322, 328, 331  
 Roenneberg, T., 357  
 Roeske, C. A., 283, 300  
 Roest, S., 213  
 Rogers, J. C., 484  
 Rogers, K. R., 667, 668  
 Rogers, O. M., 200  
 Rogers, S. G., 206, 210, 435  
 Roggen, H. P. J. R., 395  
 Rogowsky, P., 212  
 Rohde, K., 27  
 Röhm, M., 511  
 Roland, J.-C., 107  
 Rolfe, B. G., 508, 520, 521  
 Rolff, E., 451  
 Rollet, E., 602  
 Roman, H., 191, 192  
 Romano, C., 543, 545  
 Rombach, J., 359  
 Rome, L. H., 36  
 Romero, D., 510  
 Romero, J. M., 242, 249, 250, 258, 267  
 Römheld, V., 110, 115, 116  
 Römisch, K., 600  
 Rona, J.-P., 110  
 Ronson, C. W., 384  
 Roomans, G. M., 109  
 Rosahl, S., 425  
 Ros Barceló, A., 117  
 Rose, B., 691  
 Rose, J. K., 23, 32, 33  
 Rose, M. D., 582, 583, 588  
 Rose, N., 78  
 Rose, R., 684  
 Rose, S., 612  
 Rosello, J., 157  
 Rosen, W. G., 395  
 Rosenberg, N., 220  
 Rosendahl, L., 376, 382  
 Ross, C. W., 84, 428  
 Rossant, J., 415  
 Roth, B. A., 206, 207, 215  
 Rothman, J. E., 34, 35, 582, 586, 587, 605  
 Rothman, J. H., 39, 40, 42  
 Rothstein, S. J., 425, 681, 693  
 Roughan, P. G., 469-72, 474-76, 478, 479, 481, 482, 484-88, 492-95  
 Rougier, M., 197, 198  
 Rougier, A. E., 434  
 Roumet, C., 376, 378  
 Rousselin, P., 539  
 Roustier, J., 655  
 Roux, E., 356  
 Roux, S., 448  
 Rouzer, C. A., 146, 147, 158, 161, 164, 167, 172, 176  
 Row, A. L., 165  
 Rowney, F. R. P., 384  
 Roy, H., 442, 590, 592  
 Royo, J., 228-30  
 Rubartelli, A., 27  
 Rubery, P. H., 114, 508  
 Rubin, R., 25  
 Rubinstein, B., 360  
 Rubock, P., 589  
 Rudelsheim, P., 542  
 Rüdiger, W., 424, 426, 427, 441, 443, 449  
 Rueb, S., 219  
 Ruggles, P. A., 86  
 Rühle, W., 336  
 Rumler, U., 443  
 Rumpho, M. E., 133, 135, 382  
 Rundel, P. W., 565, 568  
 Rundell, J. T., 80, 93  
 Rundgren, M., 165  
 Runswick, M., 256  
 Rusche, M. L., 191, 192  
 Russ, G., 32  
 Russell, D. A., 582, 606  
 Russell, D. H., 284  
 Russell, D. W., 36  
 Russell, N. J., 469  
 RUSSELL, S. D., 189-204; 191, 196-99  
 Rustin, P., 159, 168, 382, 384  
 Rutherford, P. P., 93  
 Rutter, J. C., 134  
 Ryzicka, P., 177  
 RYAN, C. A., 651-74; 179, 468, 652, 654, 656, 660, 665, 666, 668  
 Ryberg, M., 428, 441  
 Ryle, G. J. A., 95, 376, 377  
 Ryrice, I. J., 292, 297, 444
- S
- Saab, I. N., 58  
 Sabater, F., 117  
 Sabbagh, I., 532  
 Sabulase, D., 107  
 Sachar, R. C., 283, 301  
 Sacher, J. A., 676  
 Sachs, K., 630  
 Sachs, M. A., 582, 606  
 Saedler, H., 248, 252, 253, 256, 261, 263, 538, 628  
 Safford, R., 469, 470, 473  
 Saffner, R. A., 104, 106, 110, 112, 113  
 Saganich, R., 433, 451  
 Saier, M. H., 517  
 Saito, K., 293  
 Saji, H., 358, 359, 365  
 Sakakibara, R., 227, 232  
 Sala, F., 213  
 Salamini, F., 401  
 Salemme, F. R., 297  
 Salisbury, F. B., 364  
 Salisbury, J., 137  
 Salminen, S. O., 374, 386  
 Salmon, M. R., 374, 375  
 Salom, C. L., 384, 385  
 Salsac, L., 374  
 Saltveit, M. E., 676  
 Saluja, D., 283, 301  
 Salvi, G., 655, 657  
 Salvucci, M. E., 303  
 Sambrook, J., 582, 583, 588  
 Samuelsson, B., 146, 147, 158-60, 162, 164, 165, 167, 172, 176, 180  
 Samuelsson, G., 228-32  
 SANCHEZ, F., 507-28; 512, 514, 516, 517, 519  
 Sanchez, Y., 582, 605, 610  
 Sanchez-Serrano, J., 535  
 Sanchez-Serrano, J. J., 652  
 Sandal, N., 519, 520  
 Sandal, N. N., 518, 519  
 Sandeman, G., 535  
 Sanders, C. E., 299  
 Sanders, D., 108, 116  
 Sanders, L. C., 395, 638  
 Sanders, R. A., 695  
 Sands, R. H., 152, 153, 159, 164, 169  
 Sandvig, K., 36  
 Sanford, J. C., 206, 214, 695  
 Sänger, H. L., 27  
 Saniewski, M., 174  
 Sankhla, N., 66  
 Santel, H.-J., 428  
 Sargent, J., 689  
 Sarker, R. H., 395, 398  
 Sarokin, L., 435-37  
 Sasaki, G. C., 496  
 Sasaki, K., 104, 109  
 Sassen, M. M. A., 399  
 Satina, S., 398, 399  
 Sato, N., 427, 482, 485  
 Sato, S. S., 210, 214  
 Sato, T., 543, 689, 690

- Sato, K., 295, 298, 314, 322-24  
 Sato, S., 24  
 Satter, R. L., 110-14, 355, 357, 358, 360, 361, 363, 448, 482, 652  
 Sattler, R., 398  
 Sauer, K., 319, 324  
 Saul, M. W., 206, 213, 220  
 Saunders, D. S., 352, 356, 358  
 Saunders, E. R., 242, 244, 254, 255  
 Savo, R. M., 401, 413  
 Sawhney, S., 365  
 Saxena, A., 658  
 Saxton, M. J., 665, 666  
 Sayre, R. T., 425  
 Schaefer, S., 217  
 Schafer, E., 359, 360, 366  
 Schäfer, E., 234, 361, 425-28, 430, 431, 434, 438, 445-48  
 Schäfer, W., 211  
 Scharf, K.-D., 580, 581, 583, 587, 589, 593, 594, 602, 612  
 Schatz, G. H., 318, 319, 321-23  
 Schecter, G., 147  
 Scheibe, R., 333  
 Scheid, O. M., 215  
 Schekman, R., 40, 586  
 Schnell, J., 206, 217, 219, 425, 432, 435, 436, 510, 519, 520, 540, 542, 695  
 Schendel, R., 426  
 Scherer, D. E., 470, 474  
 Scheres, B., 508, 512, 513, 518  
 Schewe, T., 146, 147, 151, 159, 167, 172, 175  
 Schick, R., 248, 249, 273, 274  
 Schiefelbein, J. W., 521  
 Schilling, J., 589  
 Schilperoord, R. A., 210, 211, 219, 512, 635  
 Schindler, C., 302  
 Schindler, C. B., 682  
 Schindler, M., 107, 297  
 Schindler, U., 437  
 Schlesinger, M. J., 580-82, 587, 602, 603, 605, 609  
 Schliwa, M., 511  
 Schliwa, U., 327, 329  
 Schlodder, E., 321, 333  
 Schlubach, H. H., 78, 80, 81  
 Schmid, J., 432, 639  
 Schmid, K. M., 474, 496  
 Schmid, S. W., 586, 587  
 Schmidt, G. W., 442, 443, 599, 606  
 Schmidt, H., 475, 478, 486  
 Schmidt, J., 510  
 Schmidt, R. R., 470, 475, 487  
 Schmidt, S., 432  
 Schmidt, W., 427  
 Schmidt, W. E., 664  
 Schmit, A.-C., 511  
 Schmulling, T., 542  
 Schneider, D. M., 563  
 Schneider, M. J., 358, 362  
 Schneider, W. T., 36  
 Schnepf, E., 200, 511  
 Schnyder, H., 84, 85  
 Schocher, R. J., 213  
 Schöffel, F., 581, 582, 593, 594, 596, 598, 599, 612  
 Schopfer, P., 66, 118, 119, 170, 171, 431, 446, 493  
 Schopker, H., 400  
 Schottens-Toma, I. M. J., 652  
 Schotz, M. C., 161, 178  
 Schrader, G., 227, 229, 234  
 Schrader, L. E., 514  
 Schrammeijer, B., 35  
 Schrauwen, J. A. M., 608  
 Schreiber, K., 174, 176  
 Schreiber, U., 314, 327-30, 332, 333, 335, 338, 341, 342, 562, 568, 571  
 Schreier, P. H., 542  
 Schrempf, M., 354  
 Schroder, J., 541  
 Schröder, M.-B., 190  
 Schroeder, J. I., 113, 536  
 Schröter, B., 571  
 Schubert, K. R., 374, 376, 383, 385, 386, 514, 516  
 Schubert, M. P., 94  
 Schuch, W., 630, 631, 639, 683-87, 693, 695  
 Schuller, K. A., 376  
 Schuller, L. J., 521  
 Schulz, W., 435, 436  
 Schulze, E.-D., 56, 57, 67, 70, 119  
 Schulze-Lefert, P., 435, 436  
 Schurr, U., 58, 63, 64, 68-70  
 Schussler, L., 24  
 Schuster, C., 425  
 Schuster, G., 282, 288, 289, 442, 570, 599, 603, 604  
 Schwaiger, H., 38  
 Schwartz, M. R., 228  
 Schwarz, Z., 628  
 Schwarz-Sommer, Z., 248, 252, 253, 256, 261, 394  
 Schweiger, H.-G., 215, 352, 354  
 Schweitzer, L. E., 375  
 Schwendener, S., 566  
 Schwieger, H. G., 288, 289  
 Scioli, S. E., 443  
 Scolnik, P. A., 425, 429, 435, 436  
 Scott, B. I. H., 354, 355, 361  
 Scott, I. M., 530  
 Scott, M. P., 30  
 Scott, R. W., 90, 210  
 Scotta, B., 532  
 Scraba, D. G., 490  
 Scully, N. J., 358, 365  
 Scutt, C. P., 405  
 Sears, E., 243  
 Seaton, G. G. R., 341  
 Seibald, W., 135  
 Sebban, P., 314, 317  
 Secher, D. S., 37  
 Seger, L., 229  
 Seibert, M., 322  
 Selawry, O. S., 228  
 Selman, B. R., 302  
 Selva, A., 382, 385  
 Selvendran, R. R., 668, 669, 689  
 Sembdner, G., 174, 176  
 Senda, M., 120  
 Senft, J. A., 196, 197  
 Senger, H., 295, 427  
 Sengupta-Gopalan, C., 43, 514, 518  
 SENTENAC, H., 103-28; 104, 108-10, 114-16  
 Serafini, T. A., 34  
 Serfling, E., 580, 581  
 Serhan, C. N., 146, 147, 167, 172, 176  
 Serunick, J., 632  
 Sethi, R. S., 511  
 Setlik, I., 336, 338  
 Setlikova, E., 336, 338  
 Seto, D., 612  
 Severens, P. P. J., 109  
 Seyfried, M., 361  
 Seymour, G. B., 680, 681, 686, 687, 689, 690, 694  
 Shabanowitz, J., 282-84, 286, 290  
 Shaff, J. E., 110, 111  
 Shah, D. M., 399, 581, 583, 584, 626, 627, 634  
 Shahak, Y., 289  
 Shahin, E. A., 695  
 Shaner, D. L., 62  
 Shanklin, J., 426, 442, 451, 470, 474, 475  
 Shannon, L. M., 38  
 Sharma, D. P., 691  
 Sharma, S., 510  
 Sharp, J. K., 652, 653, 664  
 Sharp, R. E., 58, 60, 61  
 Sharrock, R. A., 359, 426, 427, 450  
 Shaulkin, J., 451  
 Shaw, B. D., 492, 493  
 Shaw, E. K., 282, 287-89, 291, 292, 442  
 Shaw, K. L., 24  
 Shaw, K.-P., 227, 233  
 Shea, E. M., 91



- Sheehy, J. E., 374, 376, 378, 379, 382  
 Sheehy, R. E., 683-86, 689, 693-95  
 Sheen, J.-Y., 425  
 Sheldon, P. S., 470  
 Sheldrake, A. R., 114  
 Sheoran, I. S., 377  
 Shepard, N., 628  
 Shepherd, V. A., 107  
 Sheridan, W. F., 243  
 Sheriff, S., 164  
 Sherry, A. D., 472  
 Sherwood, M. T., 375  
 Shi, J., 213  
 Shibata, D., 158, 162, 164, 165  
 Shibayama, S., 686  
 Shih, M.-C., 425  
 Shilling, J., 581, 589  
 Shillito, R. D., 213, 220  
 Shimakata, T., 472, 473  
 Shimamoto, K., 213  
 Shimamura, E., 174  
 Shimazaki, Y., 359, 360  
 Shimmen, T., 511  
 Shimomura, S., 31, 543  
 Shimomura, T., 81  
 Shimura, Y., 252, 470, 485  
 Shin, S., 482  
 Shine, W. E., 479, 496  
 Shinozaki, K., 427  
 Shinshi, H., 38, 45  
 Shiomi, N., 81, 89, 90  
 Shiozawa, H., 406  
 Shirashi, H., 470, 485  
 Shirley, B. W., 438  
 Shivanna, K. R., 191, 194, 196-98, 397  
 Shochat, S., 298  
 Shock, T. L., 110  
 Short, T. W., 449, 450  
 Shrago, E., 139, 140  
 Shuffelbottom, D., 639  
 Shull, G. H., 255  
 Shuvalov, V. A., 321-23, 338  
 Sidebottom, C., 172, 472, 496  
 Sidebottom, C. M., 470  
 Siebertz, H. P., 471  
 Sieburth, L. E., 443  
 SIEDOW, J. N., 145-88; 147, 148, 156, 157, 167, 168, 170, 174, 175  
 Siefermann-Harms, D., 324  
 Siegel, B. A., 399  
 Siegelman, H. W., 424  
 Siemeister, G., 31, 543  
 Sigal, E., 158-62  
 Sigfridsson, B., 562  
 Signer, E. R., 510  
 Sijmons, P. C., 35  
 Sikk, W. K., 60  
 Silverstein, P., 436  
 Silverstein, S. J., 589  
 Silverthorne, J., 358, 364, 426, 434, 435, 532  
 Simoens, C., 542  
 Simoens, C. R., 627  
 Simon, E., 361, 362  
 Simon, R., 25  
 Simonis, W., 107  
 Simons, K., 36  
 Simons, R. W., 693  
 Simpson, D. J., 444  
 Simpson, E. E., 479  
 Simpson, J., 425, 435  
 Simpson, R. B., 695  
 Simpson, R. J., 79, 84, 402, 634  
 Sims, J. J., 177  
 Sims, T. L., 402, 412  
 Sinclair, J., 328  
 Sinclair, T. R., 374, 378, 379  
 Singh, A., 402  
 Singh, B. R., 449  
 Singh, K., 155  
 Singh, M., 193-95, 197  
 Singh, M. B., 190, 194, 195, 197-99  
 Singh, N. K., 23  
 Sinibaldi, R. M., 606  
 Sink, K. C., 695  
 Sinkar, V. P., 542  
 Sinyukin, A. M., 395  
 Sitia, R., 27  
 Sivak, M. N., 333  
 Sivasubramaniam, S., 436  
 Sjoberg, B.-M., 164, 165  
 Skoog, F., 539, 546  
 Skot, L., 374, 376, 378, 379, 382  
 Skowrya, D., 589  
 Slabas, A., 172, 496  
 Slabas, A. R., 470, 472, 473, 479, 491, 496  
 Slack, C. R., 469-72, 474-76, 478, 479, 481, 482, 484, 486, 487, 492-95  
 Slappendel, S., 152  
 Slater, A., 676, 683, 689  
 Slater, M. R., 584  
 Slatyer, R. O., 56  
 Slightom, J. L., 695  
 Slot, J. W., 39  
 Slovacek, R. E., 296  
 Slovik, S., 63, 64, 69  
 Slovin, J. P., 444  
 Sluiman, H. J., 565  
 Slusarenko, A. J., 236  
 Small, J. G. C., 377  
 Smart, I. B., 194, 195, 198  
 Smeekens, S., 425, 440  
 Smigocki, A., 544  
 Smir-Shapira, D., 581, 582, 589  
 Smit, B., 68  
 Smit, G., 510, 511  
 Smith, A. E., 84, 630  
 Smith, A. G., 399, 401, 625-27, 632, 634, 635, 638, 641, 642  
 Smith, C. G., 470, 473  
 Smith, C. J. S., 663, 681, 684, 685, 690, 691, 693, 694  
 Smith, D., 78, 79, 84, 85  
 Smith, D. C., 554, 557-59, 565, 568, 569, 572-74  
 Smith, D. H., 84  
 Smith, D. L., 104  
 Smith, F. A., 106-8, 114, 115  
 Smith, G. N., 110, 111, 113  
 Smith, H., 360, 429, 433  
 Smith, J. A. C., 103, 111  
 Smith, J. L., 164, 166, 179  
 Smith, M. A., 483  
 Smith, P. G., 64  
 Smith, P. J. C., 104, 105  
 Smith, S. E., 115  
 Smith, W. W., 301  
 Smouter, H., 79-81  
 Smyth, D. R., 242, 244, 247, 252, 257, 258, 261, 262, 266, 268, 644, 645  
 Snaith, P. J., 64  
 Snapp, S., 383, 385  
 Snel, J. F. H., 115, 314  
 Snell, W. J., 35  
 Snow, A. A., 395  
 Snozzi, M., 298  
 Snyder, K. M., 169, 171  
 So, H. B., 57  
 Sobotka, F. E., 687  
 Soetarto, S. R., 257  
 Soler, A., 108, 110, 115  
 Soll, H. J., 120  
 Soll, J., 282, 301-3, 441, 443  
 Solomon, E. I., 152  
 Solomos, T., 681  
 Somero, G. N., 382, 384, 385  
 Somers, D. A., 472  
 Somersalo, S., 328, 331, 332, 335, 336, 340  
 SOMERVILLE, C., 467-506; 476, 478, 483, 487  
 Somerville, C. R., 137, 248, 252, 468-71, 473-78, 483, 484, 486-89, 498, 521, 533, 535-37, 539  
 Somerville, J. E., 374, 378, 384, 385  
 Somerville, S. C., 137  
 Sommer, H., 242, 248, 252, 253, 256, 260, 261, 263, 394, 627, 628, 643, 644, 646  
 Sommer, K. J., 57  
 Sommers, D. A., 472  
 Soudney, S. M., 680  
 Sonego, L., 677, 688  
 Song, P.-S., 449



- Sonnewald, U., 24, 28, 38, 43  
 Sorger, P. K., 612  
 Sosountzov, L., 532  
 Southan, C., 155  
 Southon, T. E., 565, 573  
 Southwick, A., 659, 660  
 Southworth, D. A., 191, 193, 199  
 Souvre, A., 400  
 Sovonick, S. A., 110  
 Spaapen, L. J. M., 165  
 Spaink, H., 508, 512, 513  
 Spangenberg, G., 206, 215  
 Spanier, K., 542  
 Spano, L., 542  
 Spanswick, R. M., 111  
 Spector, C., 364  
 Speirs, J., 676, 681, 683, 690  
 Speirs, R. D., 230, 232  
 Spelt, C. E., 425, 628, 632, 638, 639  
 Spena, A., 542  
 Spence, S. M., 328  
 Spencer, D., 26, 30, 33, 43  
 Spencer, T. M., 214  
 Speth, V., 445, 448  
 Spiker, S., 593, 594  
 Spilatro, S. R., 174  
 Spollen, W. G., 80, 81, 85  
 Sponga, F., 428  
 Spray, C. R., 531, 532  
 Sprecher, E., 70  
 Sprent, J. I., 380, 511  
 Spruit, C. J. P., 450, 451, 531  
 Squartini, A., 510  
 Srere, P. A., 472  
 Stacey, G., 508, 510, 517  
 Stade, S., 383, 385, 515  
 Staeb, M. R., 666  
 Staehelin, L. A., 45, 288, 295, 303, 328, 442, 444  
 Stahmann, M. A., 170  
 Staiger, C. J., 511  
 Staiger, D., 436  
 St. John, J. B., 477, 478, 484  
 Stalker, D., 676  
 Stallings, W. C., 166, 179  
 Stam, P., 243  
 Stanca, A. M., 610  
 Stanton, M. L., 633  
 Starlinger, P., 540  
 Starrach, N., 104, 106, 110, 111  
 Start, W. G., 150, 157  
 Stawick, P. E., 24, 174, 179  
 Stayton, M. M., 425, 429  
 Stead, A. D., 397, 401  
 Stebbins, G. L., 250, 265, 274  
 Stecher, H., 560  
 Steczko, J., 158, 162, 164-66, 179  
 Steen, E., 84  
 Steer, M. W., 104, 395  
 Steffens, M., 668, 669  
 Stegink, S. J., 167, 519  
 Stein, J. C., 414  
 Steinback, K. E., 287, 292-94  
 Steinbiss, H. H., 217  
 Steiner, H., 164, 165, 180  
 Steinitz, B., 431  
 Steinmetz, M., 627  
 Steitz, T. A., 161  
 Stelzig, D. A., 687  
 Steponkus, P. L., 468, 489  
 Steppuhn, J., 135  
 Stern, H., 400, 632  
 Stern, J. R., 137  
 Steudle, E., 70, 103, 111, 119  
 Stevens, T. H., 39, 40, 42  
 Stewart, P. A., 69  
 Sticher, L., 601, 608  
 Stiefel, V., 484  
 Stieglitz, H., 400  
 Stiekema, W., 512, 518  
 Stinard, P. S., 537, 538  
 Stinissen, H. M., 30  
 Stinson, J. R., 401, 629  
 Stint, M., 94, 96, 139, 333  
 Stobart, A. K., 491-93, 497  
 Stobart, K., 483  
 Stocker-Wörgöter, E., 561, 570  
 Stockhaus, J., 425, 432  
 Stockinger, E. J., 282, 284  
 Stoddart, J. L., 56, 60, 174, 175, 531, 534, 540, 610  
 Stone, B. A., 677, 679  
 Stoorvogel, W., 39  
 Storz, T., 470, 475, 487  
 Stotz, G., 400  
 Stougaard, J., 519, 520  
 Stow, J., 120  
 Stoy, V., 84  
 Straathof, A. J. J., 93  
 Strand, L. L., 690  
 Strand, M., 681, 693  
 Strasser, H., 668  
 Strasser, R. J., 317, 335  
 Strauss, D., 541, 695  
 Strecker, G., 29  
 Street, J. R., 84  
 Streeter, J. G., 374, 375, 377, 382-86  
 Strittmatter, G., 512  
 Strohsacker, M. W., 158, 161  
 Strosberg, A. D., 42  
 Strous, G. J., 39  
 Strub, K., 600  
 Struhl, K., 249  
 Strydom, D., 652, 668  
 Stuart, L. S., 227, 232  
 Stubbs, H., 243, 248  
 Stuber, K., 435  
 Studer, D., 24  
 Stuitje, A. R., 414, 628, 639  
 Stumpf, D. K., 382, 383  
 Stumpf, P. K., 469, 470, 472-75, 479, 484, 492, 495-97  
 Sturm, A., 26, 28, 29, 32, 37, 41, 43  
 Stushnoff, C., 695  
 Symne, S., 483, 491-93, 497  
 Styling, S., 336  
 Subramani, S., 473  
 Suck, D., 587  
 Suda, S., 110, 111, 114  
 Suganuma, N., 381, 383, 385  
 Sugawara, J., 174  
 Suh, S. W., 301  
 Suhan, J. P., 602, 603  
 Sukenik, A., 283  
 Sukumaran, D. K., 230, 231  
 Sulzman, F. M., 352  
 Sumegi, B., 472  
 Sumi, N., 97  
 Summerfield, R. J., 376  
 Summers, M. D., 41  
 Sumner, J. B., 145  
 Sumner, R. J., 145  
 Sun, A., 608, 609  
 Sun, C., 492, 493  
 Sun, G., 292  
 Sun, L., 430, 446  
 Sundby, C., 288, 295, 297, 336  
 Sundby, C. A., 328, 334  
 Suroy, T. K., 27  
 Susek, R. E., 602  
 Süss, K.-H., 599  
 Sussex, I. M., 255, 257, 258, 416, 537  
 Sussman, M. R., 27  
 Suter, F., 283  
 Sutfield, R., 400  
 Suthar, H. K., 395  
 Sutherland, J. C., 296  
 Sutherland, T. D., 521  
 Sutton, A., 443  
 Sutton, B. C., 555  
 Sutton, D. A., 271  
 Sutton, W. D., 383  
 Suzuki, A., 515  
 Suzuki, E., 34  
 Suzuki, H., 158-61  
 Suzuki, M., 78, 80, 91  
 Suzuki, Y., 174  
 Svendsen, I., 473  
 Svensson, B., 484  
 Swain, W. F., 214, 216  
 Swanson, M. S., 438  
 Swaraj, K., 377  
 Sweeney, B. M., 352, 357, 358  
 Sweets, H. E., 316, 317, 325  
 Sweetser, D., 581, 602  
 Szabados, L., 519, 520  
 Szakács, E., 194, 195  
 Szczgłowski, K., 512  
 Szumilo, T., 28, 37

## T

- Ta, T. C., 377, 382  
 Tabaeizadeh, Z., 693  
 Tague, B. W., 26, 32, 39, 41-43  
 Tahara, S., 227, 232, 233  
 Taiz, L., 117  
 Tajima, S., 374, 380, 382-84, 517  
 Tak, T., 508, 510  
 Takabe, T., 138, 140  
 Takahashi, H., 558  
 Takahashi, J. S., 355  
 Takahashi, N., 174, 482, 485  
 Takahashi, T., 593, 596  
 Takai, T., 158-61  
 Takayama, S., 404-6  
 Takehara, T., 94  
 Takemura, H., 686  
 Takenhana, H., 689, 690  
 Takimoto, A., 358, 359, 364, 365  
 Talmadge, K. W., 677, 678  
 Tam, S. Y. T., 682  
 Tamai, N., 322  
 Tamas, I. A., 544  
 Tanabe, T., 158-61  
 Tanaka, A., 445  
 Tanaka, I., 197  
 Tanchak, M. A., 36  
 Tang, D.-T., 193, 196  
 Tanguay, R. M., 602  
 Tani, T., 177  
 Tanksley, S. D., 425, 691, 695  
 Tanner, W., 38  
 Tantikanjana, T., 402, 405, 406  
 Tappel, A. L., 155  
 Tapper, R., 557  
 Tardieu, F., 67  
 Tasaka, Y., 470, 485  
 Taulien, J., 605  
 Taviadoraki, P., 363, 364  
 Taylor, A. J., 680, 681, 687  
 Taylor, I. B., 534  
 Taylor, I. E. P., 120  
 Taylor, J. P., 402, 413  
 Taylor, J. R. N., 24  
 Taylor, J. S., 63  
 Taylor, L. P., 213, 220  
 Taylor, P., 191, 194, 196, 198  
 Taylor, R., 107  
 Taylor, S. A., 56  
 Taylor, S. S., 290  
 Taylor, W., 354  
 Taylor, W. C., 425, 429, 432, 442  
 Tchong, F., 484  
 Teakle, G. R., 425  
 Teeter, M. M., 228-33  
 Telfer, A., 293, 295, 315, 322, 323  
 Tempe, J., 520, 540  
 Tenhunen, J. D., 67, 571  
 Tepfer, M., 118, 120  
 Terada, R., 213  
 Terao, T., 444  
 Terpstra, J., 482  
 Terzi, M., 608, 609  
 Terzi, V., 610  
 Tessier, L.-H., 625, 632  
 Tester, M., 430  
 Teucher, T., 470, 475  
 Thain, J. F., 668  
 Theg, S. M., 302, 600  
 Theil, E. C., 438  
 Theimer, R. R., 492  
 Theisen, T. W., 158, 161  
 Thellier, M., 104-6, 109  
 Themmen, A. P. N., 683  
 Theologis, A., 538, 543, 660  
 Theorell, H., 145, 149  
 Theriot, L. J., 230, 232  
 Theunis, C. H., 193, 194, 196, 197  
 Theuvenet, A. P. R., 105, 109  
 Thibaud, J.-B., 108, 110, 115, 116, 668  
 Thiel, D. S., 609  
 Thiel, G., 468  
 Thiele, B. J., 158, 164, 165  
 Thielen, A. P. G. M., 328  
 Thien, W., 432  
 Thienel, U., 363, 429  
 Thimann, K. V., 167, 168  
 This, P., 484  
 Thom, D., 104, 105  
 Thomas, S., 484  
 Thomas, A., 56, 60  
 Thomas, B., 357-60, 364-66  
 Thomas, E., 211  
 Thomas, H., 56, 60, 174, 175  
 Thomas, H. R., 395  
 Thomas, T. H., 66  
 Thomashow, M. F., 210, 582  
 Thome, U., 84  
 Thompson, A. G., 134  
 Thompson, D. M., 438  
 Thompson, D. V., 514, 518  
 Thompson, G. A. Jr., 468, 482, 536, 652  
 Thompson, J. E., 175, 176  
 Thompson, J. F., 152, 153, 159, 164, 169, 384, 385  
 Thompson, K. F., 402, 413  
 Thompson, R. D., 401  
 THOMPSON, W. F., 423-66; 425, 426, 429-32, 434, 435, 439, 446, 447  
 Thomson, A. B. R., 107  
 Thomson, W. W., 109, 120, 677, 687  
 Thornber, J. P., 283, 284, 442, 443  
 Thorne, S. W., 427  
 Thornley, W. R., 80, 81, 86, 93  
 Thorsness, M. K., 409, 410  
 Thummler, F., 516  
 Thunberg, E., 229, 230  
 Thurman, D. A., 136, 137, 139  
 Tieman, D., 684  
 Tigchelaar, E. C., 663, 683, 689  
 Tjian, R., 643  
 Tillmann, U., 31, 543  
 Tilly, K., 442, 590, 592  
 Tilney-Basset, R. A. E., 250  
 Tilton, V. R., 395  
 Timblin, C., 628  
 Timko, M. P., 435, 436  
 Timmerhaus, M., 334  
 Ting, J., 584  
 Tingey, S. V., 425, 514  
 Tinland, B., 542  
 Tissieres, A., 580, 587, 612  
 Tixier, M., 147, 170  
 Tjepkema, J. D., 378, 379  
 Tjian, R., 249  
 Tobin, E. M., 358, 364, 425, 426, 430, 434, 435, 437, 443, 444, 446  
 Toenjes, K., 681, 685, 691, 692  
 Toensberg, T., 558  
 Tokuhisa, J. G., 359, 426, 428  
 Tolbert, N. E., 481, 485  
 Tomasic, J., 80, 81  
 Tomes, M., 689  
 Tomiyama, K., 657  
 Tomizawa, K.-I., 426, 427, 433, 451  
 Tomos, A. D., 56, 60, 111, 119  
 Tong, C. B., 662  
 Tong, C. B. S., 679, 688, 690  
 Toozee, J., 32  
 Töpfer, R., 217  
 Toppan, A., 654  
 Toriyama, K., 213, 409, 410, 414  
 Tormanek, H., 492  
 Torrey, J. G., 510, 512, 518  
 Toubart, P., 510, 653, 659  
 Touchard, P., 109  
 Toulon, V., 108, 115  
 Touze, A., 657, 660  
 Toyoshima, K., 227, 232, 233  
 Tran Thanh Van, K., 510, 635, 653, 659  
 Traska, A., 134  
 Travis, J. L., 401, 626, 629, 630  
 Trebst, A., 336  
 Treier, U., 583  
 Treisman, R., 256  
 Trentham, D. R., 468  
 Trese, A. T., 518

- Trewavas, A. J., 468, 540  
 Trick, M., 402, 403, 405, 406  
 Trinchant, J. C., 382  
 Trish, T. H., 512  
 Trinick, M. J., 374  
 Tripathy, B. C., 444  
 Trnovsky, J., 414  
 Trop, M., 157  
 Trouvelot, A., 521  
 Truchet, G. L., 508, 510-13,  
 518, 520, 660  
 Trudel, J., 654, 655  
 Truettner, J., 416, 626, 631,  
 632, 634, 635, 638, 641  
 Trulsson, A. J., 695  
 Tsai, F.-Y., 425  
 Tschermak, E., 559, 562, 566  
 Tschermak-Woess, E., 555,  
 562, 563  
 Tsudzuki, T., 362  
 Tsui, L. C., 415  
 Tsuji, H., 445  
 Tsukamoto, C., 404-6  
 Tsukamoto, M., 517  
 Tsurumi, S., 111  
 Tucker, D. J., 64  
 Tucker, G. A., 630, 631, 676,  
 680-87  
 Tucker, M. L., 688, 695  
 Turner, N. E., 693  
 Turgeon, G., 511  
 Turian, G., 511  
 Türk, R., 561, 570  
 Turner, G. L., 380, 384  
 Turner, J. C., 534, 535, 539  
 Turner, N. C., 57, 68  
 Turner, W. B., 174  
 Turpen, T., 606  
 Turpin, D. H., 382, 383, 385  
 Turton, J. F., 514, 520, 521  
 Twary, S. N., 376  
 Twell, D., 401, 629, 630, 640,  
 641  
 Tye, B., 256  
 Tyson, J. J., 354  
 Tyystjärvi, E., 328  
 Tzinas, G., 444, 445
- U
- Uchida, T., 415  
 Uchimiya, H., 213  
 Udvardi, M. K., 384, 385, 517  
 Ueda, J., 174  
 Ueda, T., 436, 437  
 Ueda, Y., 404, 405, 683, 684  
 Uemura, M., 468, 489  
 Uhrig, H., 401  
 Ukoha, A. I., 178  
 Ulrich, S. E., 27  
 Umbach, A. L., 405-7  
 Umemara, Y., 89  
 Upcroft, J. A., 363
- Urquiza, N., 243, 257, 262  
 Ursin, V. M., 200, 401, 626,  
 630, 633, 636, 640, 682  
 Urvasch, I., 70  
 Urwin, N., 433
- V
- Vaadia, Y., 67  
 Vahala, T., 532, 533  
 Vainstein, A., 442  
 Vakhmistrov, D. B., 103  
 Valent, B., 652, 653, 664  
 Valent, B. S., 652  
 Vallejos, R. H., 287, 300, 301  
 Valls, L. A., 39, 40, 42  
 Valvekens, D., 627  
 Van, K. T. T., 510, 635, 653,  
 659  
 van Aelst, A. C., 197  
 van Batenburg, F. H. D., 510,  
 511  
 van Bakkum, H., 93  
 van Blokland, R., 638, 639  
 van Boom, J., 664  
 Van Brussel, T., 508, 510-12  
 VANCE, C. P., 373-92; 374,  
 376, 382-86, 514-16, 520,  
 521  
 Vance, D. E., 479-81  
 Vance, V. B., 493  
 van Cleve, B., 428, 441  
 Van Cutsem, P., 104, 106, 655  
 van Dam, F., 425  
 Van Dam, H., 512, 518  
 Vandekerckhove, J., 24, 44  
 Vandenbosch, K. A., 377, 517  
 Van den Broeck, G., 435  
 Van den Bulcke, M., 24, 44,  
 66  
 van den Elzen, P. J. M., 35,  
 632, 638  
 Vanderhoef, L. N., 660  
 van der Knaap, E., 508, 513,  
 518  
 van der Krol, A. R., 628, 639,  
 693  
 van der Lecq, F., 155  
 van der Maas, H. M., 194, 195  
 van der Meer, I. M., 639, 693  
 van der Meer, R. A., 155  
 VanderMolen, G. E., 690  
 van der Staay, G. W. M., 299  
 Van Der Straeten, D., 543  
 van der Veen, J. H., 531, 533  
 van der Vies, S. M., 442, 590,  
 592  
 van der Wiel, C., 512, 513,  
 518  
 Van Der Woude, W. J., 361  
 Van Deurs, B., 36, 490  
 van de Ven, M., 322
- van de Wiel, C., 508, 512,  
 513, 517, 518  
 van Dorsen, R. J., 323, 324  
 van Dyk, T. K., 590  
 van Eden, J., 243  
 van Engelen, F., 508, 513, 518  
 Van Etten, C. H., 228, 232  
 Van Gelder, B. F., 149, 152  
 van Gorkom, H. J., 314, 323,  
 324, 327, 328, 338  
 van Grisven, M. Q. J. M., 438  
 van Hasselt, P. R., 333  
 van Herpen, M. M. A., 608  
 Van Kammen, A., 374, 386,  
 508, 511-13, 518  
 Van Kammen, A., 508, 512,  
 517  
 van Kooten, O., 314  
 van Kuik, J. A., 28  
 van Laere, A., 401  
 van Lammeren, A., 512, 517,  
 518  
 Vanlerberghe, G. C., 382, 383,  
 385  
 van Lierop M.-J., 512, 518  
 Van Lijsebettens, M., 542  
 Van Loon, L. C., 44, 45  
 Van Luipen, J., 109  
 Van Montagu, M., 211  
 Van Montagu, M. C., 209,  
 217, 218, 220, 435, 543,  
 627  
 Van Onckelen, H., 542  
 Van Os-Ruygrok, P. E., 219  
 van Rossum, C. M. A., 45  
 Van Sluys, M. A., 540  
 van Tuinen, A., 451  
 van Tuinen, A. J., 628, 632,  
 638, 639  
 Van Volkenburgh, E., 66, 110,  
 111  
 van Went, J. L., 193, 194,  
 196, 197  
 Van Wiemeersch, L., 543  
 van Wijk, K. J., 333  
 Varghese, J. N., 34  
 Varner, J. E., 107, 108, 518,  
 677, 678  
 Varrichio, A., 158, 161  
 Vasil, I. K., 209, 213, 214,  
 395  
 Vasil, V., 213  
 Vasse, J., 510, 512, 518, 520,  
 660  
 Vaughn, K. C., 519  
 Vaux, D., 32  
 Vavasseur, A., 113  
 Vazquez, D., 230, 232  
 Vázquez, M., 512, 517, 519  
 Veenstra, J., 693  
 Veg, Z., 157  
 Veldink, G. A., 146, 147, 151-  
 57, 159, 164-66, 175

- Vella, J., 380, 383, 384  
 Venis, M., 536  
 Verbeke, J. A., 399  
 Verdun, R., 664  
 Vergne, P., 195, 199  
 Verhagen, J., 165  
 Verhulst, W. M., 148  
 Verma, D. P. S., 210, 508,  
 514-18, 661, 693  
 Vermeer, E., 684  
 Vermueulen, J. A. W. H., 229  
 Vernon, L. P., 227-29, 233  
 Vermooy-Gerritsen, M., 156,  
 157  
 Vernotte, C., 299, 314, 323,  
 325, 327-31, 334, 338, 341  
 Versel, J. M., 110, 116  
 Verwoerd, T. C., 35  
 Vesper, M. J., 111, 117  
 Vessey, J. K., 375, 377  
 Vester, F., 228  
 Vianelli, A., 293, 294  
 Vick, B. A., 147, 154, 168,  
 170  
 Vidal, J., 515  
 VIERLING, E., 579-620; 441,  
 442, 580-83, 585, 589,  
 593-99, 601, 603, 604,  
 607-9  
 Vierstra, R. D., 359, 361, 425,  
 426, 428, 430, 434, 442,  
 451, 605, 606  
 Vigh, L., 468  
 Viitanen, P. V., 442, 443, 590,  
 592  
 VijayRaghavan, K., 627  
 Villarroel, R., 66  
 Vilmorin, P., 242  
 Vince-Prue, D., 352, 357-60,  
 364-66  
 Vincent, J. M., 508, 510  
 Viola, G., 31, 543  
 Virgin, H. I., 444  
 Virgin, I., 336  
 Virk, S. S., 120  
 Virlet, J., 563  
 Viro, M., 444  
 Visser, R. D., 374, 376, 378  
 Vitale, A., 26, 28, 29, 32, 33,  
 37, 38, 41  
 Vithanage, H. I., 400  
 Vliegthart, J. F. G., 28, 146,  
 147, 149, 151-57, 159,  
 164-66, 175  
 Vöchtting, H., 271, 274, 275  
 Voelker, T. A., 26, 28, 32, 35,  
 38, 41, 43  
 Vogel, J. P., 582, 583, 588  
 Vögeli, U., 45  
 Vogelmann, T. C., 335, 429  
 Volenec, J. J., 85, 89  
 von Figura, K., 38, 39  
 von Gromoff, E. D., 583  
 von Heijne, G., 25, 135, 601,  
 686  
 von Meyenburg, K., 490  
 von Schawen, A., 28, 38  
 von Wettstein, D., 444  
 Von Wettstein-Knowles, P., 484  
 Vorst, O., 425  
 Voss, S., 139, 140  
 Voue, M., 104  
 W  
 Wachter, E., 135  
 Wacker, I., 511  
 Wada, H., 227, 232, 468, 475,  
 478  
 Wada, K., 228, 232, 233  
 Wagner, E., 352, 357, 431  
 Wagner, R., 135  
 Wagner, V. T., 191, 195, 197  
 Wagner, W., 80, 81, 86-88, 90,  
 92, 93, 95, 96  
 Wahleithner, J. A., 636  
 Walbot, V., 206, 207, 213,  
 220, 221  
 Walden, D. B., 580, 593, 594,  
 596, 602, 608  
 Walden, R., 210  
 Waldman, T., 668  
 Waldron, L., 430  
 Walker, D. A., 137, 296, 333,  
 338, 341  
 Walker, D. B., 399  
 Walker, E. L., 425, 514  
 Walker, J., 408  
 Walker, J. E., 688, 690  
 Walker, N. A., 107, 109, 115  
 Walker, R. P., 88, 93, 94  
 Walker-Simmons, M., 654  
 Wallace, D. H., 401, 413  
 Walling, L. L., 282, 284  
 Wallner, S. J., 677, 681, 683,  
 688, 690  
 Wallroth, M., 626, 631, 632,  
 634, 635, 638, 641  
 Walsh, D., 449  
 Walsh, K. B., 375, 377  
 Walter, G., 583, 587  
 Walter, P., 600  
 Walters, R. G., 330  
 Walton, D. C., 63  
 Wang, N.-Y., 155  
 Wang, S.-Y., 284  
 Wang, X., 470, 481  
 Wang, Y., 227, 233  
 Wanner, G., 492  
 Ward, K., 436, 437  
 Wardlaw, C. W., 257  
 Wareing, P. F., 66  
 Warembourg, F. R., 376, 378  
 Warm, E., 676  
 Warpeha, K. M. F., 425, 426,  
 438, 449, 450  
 Warwinger, A., 67, 70  
 Warwick, N., 471, 486, 487  
 Watada, A. E., 679  
 Watanabe, A., 425  
 Waters, J. K., 383  
 Waters, M. G., 586  
 Watson, C. F., 663, 681, 690,  
 693, 694  
 Watson, G. R., 470  
 Watson, J. C., 425, 431, 434,  
 435  
 Watson, J. L., 295  
 Watson, P. J., 360  
 Watt, S. M., 439  
 Watt, W. M., 104  
 Wayne, R. O., 448  
 Weaver, C. D., 517  
 Webb, G., 95  
 Webb, J. A., 110, 600  
 Webber, A. N., 329  
 Weber, G., 221  
 Weber, L. A., 610  
 Weber, P. C., 297  
 Weber, R., 149, 152  
 Weberling, F., 246, 250, 264  
 Weeden, N. F., 520, 521  
 Weger, H. G., 382  
 Wehmeyer, B., 425, 427  
 Weidhase, R. A., 174  
 Weiler, E., 541  
 Weiner, J. H., 490  
 Weinhandl, J. A., 402  
 WEIS, E., 313-49; 314, 323,  
 329, 331-34, 338-41  
 Weisbeek, P., 425, 440  
 Weisenseel, M. H., 110, 116  
 Weising, K., 206  
 Weiss, T. J., 490, 491  
 Weissbach, H., 581, 582, 589  
 Weisz, P. R., 374, 378, 379  
 Welch, W. J., 581, 582, 586,  
 589, 602, 603, 610  
 Wells, B., 678, 679, 687  
 Wells, T. N. C., 155  
 Welters, P., 520  
 Wendler, J., 295, 320  
 Wen-jun, S., 514, 520, 521  
 Wenig, A., 425  
 Went, F. W., 67  
 Wenzler, H., 38, 45  
 Werdan, K., 130, 132  
 Werneke, J. M., 425  
 Werner, D., 384, 511, 517  
 Werner-Washburne, M., 137,  
 139, 140, 581, 586, 589  
 Wessel, D., 135  
 Wesselius, J. C., 451  
 Wessinger, M. E., 133  
 Wessler, S. R., 264  
 West, C. A., 653, 654  
 Westgate, M. E., 61  
 Westwood, J. T., 612  
 Wetzels, S., 24

## 734 AUTHOR INDEX

- Weyers, B., 335, 336  
 Weyrauch, C., 429  
 White, F., 543  
 White, F. F., 542  
 White, I. R., 290  
 WHITE, M. J., 423-66; 432, 439, 444, 445  
 White, S. L., 33  
 Whitecross, M. L., 114-16  
 Whitlow, M., 230, 231, 233  
 Whitmarsh, J., 326, 329  
 Whitney, M. A., 148, 149  
 Whittaker, J. W., 152  
 Widders, I. E., 111  
 Widger, W. R., 287, 288, 293  
 Wiebold, W. J., 377  
 Wiech, E., 111  
 Wiedemann, M., 27  
 Wiederrecht, G., 612  
 Wieland, F. T., 34  
 Wiemken, A., 38, 80, 81, 86-88, 90, 92, 93, 95, 96, 521  
 Wienand, U., 538, 628  
 Wieneke, U., 510  
 Wiermann, R., 400  
 Wieruszewski, J. M., 29  
 Wijngaarden, W., 109  
 Wilcox, J. R., 148, 156  
 Wild, A., 336  
 Wild, G. M., 81  
 Wildner, G. F., 299  
 Wildon, D. C., 668  
 Wilkens, T. A., 686  
 Wilkins, M. B., 300, 355, 357, 358, 362, 363  
 Wilkins, T. A., 28, 33, 38, 43, 44  
 Wille, F., 78  
 Wiley, D. L., 135  
 Williams, E. G., 196, 394, 399-402, 626, 642  
 Williams, J. P., 470, 479, 488  
 Williams, L. E., 375  
 Williams, M. L., 88, 95  
 Williams, P. N., 474, 490  
 Williams, R., 214  
 Williams, R. S., 297  
 Williams, R. W., 230  
 Williams, W. E., 355  
 Williams, W. P., 293, 334  
 Williamson, M. S., 27  
 Willing, R. P., 401, 629  
 Willmitzer, L., 24, 28, 38, 43, 425, 432, 652  
 Wilson, C. E., 395, 398  
 Wilms, H. J., 191, 193, 194, 196  
 Wilms, H. L., 191  
 Wilson, A. K., 534, 535, 539  
 Wilson, A. T., 573  
 Wilson, P. W., 374, 375  
 Wilson, W., 612  
 Winfree, A. T., 354  
 Wing, R., 401, 629, 630, 640, 641  
 Wing, R. A., 401, 630, 633, 682  
 Wingender, R., 510  
 Winkler, V., 685  
 Winter, J., 399, 581, 583-85, 609  
 Winter, J. A., 583, 584  
 Winter, K., 133, 330, 332, 335, 338  
 Winterfeld, V. K., 228  
 Winters, A., 90, 91  
 Winzeler, M., 84  
 Wion, K. L., 161, 178  
 Wiskich, J. T., 137, 140  
 Wistow, G. J., 593, 603  
 Wittemer, C., 284  
 Wittenberg, B. A., 514, 519  
 Wittenberg, J. B., 514, 519  
 Witters, R., 401  
 Witty, J. F., 374, 376, 378-80, 382  
 Wobus, U., 27  
 Woldegiorgis, G., 139, 140  
 Wolff, I. A., 228, 232  
 Wolfrum, J., 221  
 Wollman, F.-A., 289, 296, 299  
 Wolterbeek, H. T., 105, 106, 109  
 Wong, M., 430, 446, 447  
 Wong, S. C., 336  
 Wong, T. C., 81  
 Wong, Y.-S., 449, 687  
 Woo, K. C., 137  
 Wood, E. A., 517  
 Wood, J. M., 384  
 Wood, S. M., 511  
 Woodworth, M., 103  
 Woolford, C., 442, 590, 592  
 Wordsell, W. C., 242, 251, 271, 274  
 Woodstra, M., 117  
 Woyanowski, J. M., 233  
 Wright, H., 492, 493  
 Wright, R., 581, 583, 584  
 Wright, S., 439  
 Wu, C., 612  
 Wu, C. H., 583, 585  
 Wu, R., 213, 219  
 Wullems, G. J., 608  
 Wurzbarger, J., 175  
 Wuytack, R., 104  
 Wydrzynski, T., 315  
 Wyman, K. D., 283  
 Wyn Jones, R. G., 56, 60  
 Wyochik, N. A., 39  
 Wyse, D. L., 472  
 Wyse, R. E., 110, 111, 116  
 Wyss, P., 521  
 X  
 Xiao, C.-M., 608, 609  
 Xu, B., 401  
 Xu, H., 191, 194, 196, 198  
 Y  
 Yabuuchi, S., 148, 156  
 Yacob, R. K., 582, 610  
 Yadav, N., 470, 474, 479, 491  
 Yadev, N. S., 474  
 Yalovsky, S., 282  
 Yamada, T., 437  
 Yamada, Y., 193, 196  
 Yamaguchi, J., 200, 401, 626, 629, 630, 633, 636, 640, 641, 682  
 Yamaizumi, M., 415  
 Yamaki, S., 688  
 Yamamoto, H., 177  
 Yamamoto, H. Y., 332  
 Yamamoto, K. R., 605  
 Yamamoto, K. T., 359, 360  
 Yamamoto, S., 84, 92, 158  
 Yamamoto, Y., 381, 383, 385  
 Yamane, H., 174  
 Yamaoka, T., 120  
 Yamashita, Y., 94  
 Yamaya, J., 485  
 Yamazaki, I., 322  
 Yan, Q., 213  
 Yang, H.-Y., 193, 195, 213  
 Yang, S. F., 167, 535, 540, 662, 676, 689, 690  
 Yang, Z.-Q., 193, 196  
 Yanofsky, M. F., 242, 256, 394, 541, 643  
 Yao, Z., 479  
 Yates, J. R. III, 284  
 Yatsu, L. Y., 492, 493  
 Yazdanparast, R., 158, 162, 165  
 Yen, T. J., 438  
 Yenofsky, R., 158, 165  
 Yenofsky, R. L., 158, 162, 165  
 Yeung, E. C., 63  
 Yewdell, J. W., 32  
 Yocum, C. S., 378, 379  
 Yoder, J. I., 540, 691, 695  
 Yokohama, K., 511  
 Yokoyama, C., 158-61  
 Yonenomoto, W., 290  
 Yoneyama, T., 377, 382, 383, 385  
 Yong, M.-H., 436  
 Yordanov, I. T., 599  
 York, W. S., 653, 661, 678  
 Yoshida, K., 663  
 Yoshida, O., 689, 690  
 Yoshimoto, T., 158-61  
 Yoshizumi, H., 227, 228, 231-33

- Yost, H. J., 605  
 Young, A., 332  
 Young, D. H., 652, 668  
 Young, H. J., 633  
 Young, H. L., 470, 474  
 Young, J. P., 66  
 Young, N. D., 691  
 Young, R. A., 581, 602  
 Young, R. E., 109, 120, 677, 687, 688  
 Yousif, A. E., 135  
 Yu, J., 137  
 Yu, S.-M., 402, 404, 405, 407, 409, 413, 634
- Z**
- Zaal, M. A. C. M., 194, 195  
 Zaat, S. A. J., 508, 510  
 Zagouras, P., 32  
 Zakut, R., 147, 148, 154
- Zalenski, A., 508, 512, 513  
 Zanstra, P. E., 115  
 Zauberman, G., 677, 687, 688  
 Zeevaert, J. A. D., 63, 66, 533, 535, 537  
 Zeiger, E., 358, 361  
 Zeikus, R. D., 228, 229  
 Zelechowska, M., 514, 517  
 Zelechowska, M. G., 516  
 Zengbe, M., 374  
 Zhang, H. M., 213  
 ZHANG, J., 55-76; 58, 61-63, 67, 70  
 Zhang, M., 518  
 Zhang, R., 408  
 Zhang, W., 213  
 Zhang, X., 213  
 Zhang, Y., 30  
 Zhao, Z., 428, 434  
 Zhao, Z. F., 426, 430  
 Zhou, C., 193, 195
- Zhu, N.-Z., 284  
 Zid, E., 106  
 Ziegler, E., 668, 669  
 Ziegler, H., 70, 561, 562, 564, 565  
 Zielinski, R. E., 425  
 Zimmerman, D. C., 147, 154, 168, 170, 172  
 Zimmerman, J. L., 593, 608-10  
 Zimmermann, M. H., 545  
 Zimmermann, U., 119  
 Zingen-Sell, I., 36  
 Ziv, J., 175  
 Zobel, R. W., 534, 538  
 Zoppè, M., 38  
 Zott, W., 612  
 Zuber, H., 283  
 Zucchelli, G., 293  
 Zumbusch, E., 335, 336  
 zur Nieden, U., 583, 587  
 Zwieb, C., 27  
 Zylicz, M., 583, 589, 590





# SUBJECT INDEX

## A

- Absciscic acid**, 62-70, 174  
content  
field studies, 66-67  
flooded plants, 68  
soil, 70  
xylem controls stomatal behavior, 64-66  
cytokinin overrides, 68  
embryo, 534  
fluxes, 69-70  
metabolism of, 69  
root signals, 62-70  
synthesis  
soil drying, 63-64  
soil fungi and algae, 70  
root tips, 69  
see also Hormone molecular genetics
- Academy of Cats**, 12-14
- Acetylene**, 379
- N-Acetylarginine**, 284, 290
- N-Acetyltransferase**, 355
- Acid growth**, 117-19
- Acyl carrier protein**  
see Glycerolipid synthesis
- Acyltransferase**  
see Glycerolipid synthesis
- Additives**  
fructans, 97
- Aerial organs**  
apoplast, 103  
inflorescence meristem  
see Floral homeotic genes
- pH**, 110  
solute, 111
- ag gene**, 256-57, 266
- Agrobacterium tumefaciens**  
phytohormone action, 541-42
- Agrobacterium-mediated gene transfer**, 519, 638, 641, 691-93  
see also Gene transfer to plants
- Agroinfection**  
gene transfer, 211-12
- Agropyron cristatum**  
fructan, 78-79
- Alanine**, 382
- Alfalfa**  
see Carbon in N<sub>2</sub> fixation
- Algal photobionts**  
see Lichen symbiosis

- Allium sativum**  
fructan, 80
- Aloisi, Massimiliano**, 7
- Ambrosia**  
sperm cells, 195
- Amino acid**  
root nodules, 381
- Amino acid sequences**, 22, 24, 474  
endoplasmic reticulum retention signals, 31-32, 41, 44-45  
ENOD2, 518  
lipoxygenase, 158-64, 179  
phosphorylation site, 283-84  
phytochrome, 426  
polygalacturonase, 686  
SLF alleles  
see *Brassica* self-incompatibility genes  
thionins, 228-29, 231, 235-36  
see also Heat shock proteins
- $\alpha$ -Aminobutyric acid**, 658
- $\gamma$ -Aminobutyric acid**, 382, 384-85
- 1-Aminocyclopropane-1-carboxylic acid**, 167-68, 543
- 1-Aminocyclopropane-1-carboxylic acid oxidase**, 546
- 1-Aminocyclopropane-1-carboxylic acid synthase**, 543
- Ammonia assimilation enzymes**, 514-15
- $\alpha$ -Amylase**, 36
- Anacystis nidulans**  
phosphate uptake, 107
- Anantha mutant**, 248
- Angiosperm**  
see Sperm cells flowering plants
- Anion exchange chromatography**  
fructan, 80-81, 91  
lipoxygenase, 149
- Anions**, 104, 105, 110  
abscisic acid traps, 68
- Antenna systems**  
chlorophyll fluorescence, 295, 317-19, 322-23, 328  
quenching, 332, 336-37
- Anthers**  
SLF, 409-10  
see also Floral organ differentiation

- Anthocyanin**, 264, 537-38  
phytochrome-induced synthesis, 428, 431
- Antibodies**  
cross-reactive, 156-58
- Antifungal compounds**  
role lipoxygenase, 177-78
- Antilipoxygenase**, 156-57
- Antimycin**, 332-33
- Antioxidants**, 175
- Antirrhinum majus***  
genes, 543, 639, 643  
def, 627, 644, 646  
floral homeotic, 243-47
- Antisense RNA techniques**, 531, 547
- Aphids**  
see Plant-aphid system
- Apical**  
dominance  
phytohormone action, 544-45  
growth, 510-11
- Aplysia delipans***  
polygalacturonate binding lectin, 654
- Apoplast**, pH and ionic conditions, 103-128  
conclusion, 121  
introduction, 103-4  
ionic properties, 104-112  
diffusion barrier, 107-8  
electrostatic interactions, 109-10  
ion diffusion, fixed changes, 108-9  
ion exchanger, 104-7  
pH (pH<sub>o</sub>), 110-11  
solute, 111-12  
physiological consequences, 112-21  
Ca<sup>2+</sup> mechanical properties cell walls, 120-21  
cell expansion, water transport, 119-20  
enzyme activity, extracellular, 116-17  
H<sup>+</sup>-cotransports, 114-16  
ion reservoir, 112-14  
pH and acid growth, 117-19
- Arabidopsis thaliana***, 137, 433  
genes, 627, 643-46  
ag, 256-57, 266

- floral homeotic, 243-47  
 phy, 359  
 fusion proteins, 43  
 heat shock proteins, 585, 599  
 hormones  
   see Hormone molecular genetics  
 mutants  
   see Glycerolipid synthesis; Hormone molecular genetics  
 phytochrome-related gene sequences, 427, 430, 446  
 root hair development, 521  
*Arabinose*, 680-81  
*Arabinosidase*, 658  
 Arg-274, 136  
 Arginyl residue, 290  
 Arnon, Daniel, 12  
 Arsenite  
   heat shock proteins, 581  
*Artemisia*  
   sperm cells, 195  
 Ascorbate  
   chloroplast uptake, 140  
 Ascorbic acid  
   role  
     growth, 11  
     metabolism, 10  
*Asparagine*, 382  
   residues  
     glycan attachment, 28  
*Asparagus officinalis*  
   fructan, 81, 89  
   enzymes, 90  
 Aspartate, 137, 382  
 Aspartate aminotransferase, 383-84, 386, 516  
*Aspergillus niger*  
   necrosis, 657  
 Aspirin, 668  
 Atractyloside, 139  
 ATP, 115, 130, 197, 443  
   chlorophyll fluorescence, 293-95  
     Rubisco activation, 301  
     fumarate reductase, 383  
     heat shock proteins, 586-87, 591  
   nitrogen  
     reduction, 378, 380-81  
     transport, 515  
 ATP/ADP Transport, 139-40, 302  
 ATPase, 449, 587, 590-91  
 Aurea mutant, 428, 450-51  
 Auxin  
   cell enlargement, 15  
   parthenocarp, 8-9  
   polar transport, 508, 512  
   primary action, 10-11  
   regulation  
     glycoprotein, 24  
     see also Oligosaccharide signals  
   role in metabolism, 7  
   similarity with fusicoccin, 15  
   stimulation of growth, 14  
   see also Hormone molecular genetics  
*Avena*, 120-21  
   senescence, 175  
 Avenothionin, see Thionin  
 Avocado  
   antifungal compounds, 177-78  
 B  
 Bacterial signals  
   see Nodulin gene regulation  
 Ballio, Alessandro, 15  
 Beevers, Harry, 13  
*Bellis*  
   sperm cells, 195  
 Bertossi, Felice, 6, 12, 14  
*Beta vulgaris*  
   sperm cells, 194-95  
 Bianchetti, Renato, 10-11  
 Binding protein  
   heat shock proteins, 583, 588  
   secretory system, 29-32  
 Biolistics  
   gene transfer, 214-15  
 Bioluminescence  
   rhythms, 353, 357  
 Boeri, Enzo, 7  
 Bongkreik acid  
   ATP transport, 140  
 Bonsignore, Arturo, 7  
*Bradyrhizobium*  
   see Nodulin gene regulation  
*Brassica*, 627  
   gene regulation, 642-43  
   sperm cells, 191, 194-95, 198-99  
*Brassica* self-incompatibility genes, 393-422  
   expression of SLG gene in pistils and anthers, 409-12  
   crucifers, 409-10  
   transgenic tobacco, 410-12  
   genetic ablation floral tissues, 415-16  
   crop improvement, 416  
   study of plant development, 415-16  
   genetic interactions, 412-14  
   self-compatible lines, 412-13  
   transgenic plants, 414  
   introduction, 394  
   molecular analysis, 401-8  
   allelism at S-locus and SLG gene, 402-5  
 S-locus, molecular complexity, 407-8  
 S-locus related (SLR) genes, 405-7  
 S-multigene family, 402  
 pollination and pollen tube growth, 395-98  
   gametophytic and sporophytic determination, 397-98  
   male gametophyte and pistil interactions, 395-97  
 reproductive structure development, 398-401  
   male gametophyte, 399-401  
   pistil tissue pollination functions, 398-99  
*Brassica napus*  
   seeds, 473  
 Brefeldin A, 32  
 Brewbaker-Kwack medium, 192-93, 196  
 Brownian motion  
   light-harvesting chlorophyll, 297  
 C  
 C<sub>3</sub> plants  
   chloroplast envelope phosphate translocator, 130-32  
   fructan, 78  
 C<sub>4</sub> plants  
   chloroplast envelope phosphate translocator, 132-133  
   fructan, 78  
*Cab* genes  
   see Chloroplast protein phosphorylation; Molecular photophysiology  
 CAB proteins, 442-45  
 Calcium, 362  
   apoplast, 104, 117, 120-21  
   flux changes, 448  
   oscillator rhythms, 356  
   peribacteroid membrane, 517  
*Rhizobium*, 510-11  
 Calvin cycle, 473  
 Carbohydrate transfer  
   see Lichen symbiosis  
 Carbohydrates, soluble  
   see Fructan metabolism in grasses and cereals  
 Carbon  
   lichen synthesis, 565, 568  
   metabolism  
     enzymes, 515  
     fructan, 94-95  
     oscillations, 363  
     photosynthetic electron transport, 296

- Carbon dioxide, 108, 339-40, 662  
 exchange rhythm, 362  
 fertilization, 374-75  
 lichen synthesis, 561, 568, 570-71
- Carbon in  $N_2$  fixation, 373-92  
 conclusions, 386  
 introduction, 373-74  
 nodule oxygen diffusion, 378-81
- $O_2$ -limited carbon metabolism, 381-86  
 GABA, 384-85  
 malate, 381-82  
 nodule organic acids, 382-84  
 unresolved issues, 385-86
- photosynthetic carbon limitations, 374-78  
 costs, 374-76  
 transport, 376-78
- Carboxyl-terminal tetrapeptide KDEL sequence, 544
- Carboxypeptidase, 40
- Carboxyterminal domain endoplasmic reticulum retention signals, 31-32  
 SEKDEL, 32
- Carotene  
 oxidized, 338
- Carotene oxidase  
 see Lipoxigenase: structure and function
- Carotenoids, 428  
 bleaching, 154  
 inhibitors, 432  
 see Lipoxigenase: structure and function
- sporopollenin, 563, 566
- Cations  
 cell walls, 104-5
- CEC, 104, 106
- Cell  
 defense system, 24  
 role lipoxigenase, 166  
 sperm  
 see Sperm cells flowering plants
- elongation  
 gibberellic acid, 534-35  
 indoleacetic acid, 117-8
- wall  
 enzymes, 116-7  
 glycoproteins, 518  
 pore size, 107  
 secretory system proteins, 23  
 thionins, 234  
 turgor, 112, 114, 119  
 see also Apoplast, pH and ionic conditions
- Cell wall hydrolases in fruit ripening, 675-703  
 fruit ripening function, 689-95  
 cell wall structure, 692-94  
 modification, 698-90  
 polygalacturonase gene, 691-92  
 polygalacturonase gene in *rin* fruit, 692  
 polygalacturonase gene expression, 693-94  
 polygalacturonase gene suppression, 693  
 ripening and quality, 694-95  
 tomato modification, 698-90
- future prospects, 695
- hydrolases, 681-89  
 Cx-cellulase, 687-88  
 endo-polygalacturonase, 682-83  
 exo-polygalacturonase, 682  
 other, 688-89  
 pectinmethylesterase, 686-87  
 polygalacturonase, 682-86  
 polygalacturonase gene expression, 683-84  
 polygalacturonase isozymes, 684-86
- introduction, 675-76  
 structure and ripening-associated changes, 676-81  
 cellulose, 677-78  
 hemicellulose, 678-79  
 pectic, 679-81  
 other components, 681
- Cell-fractionation studies, 606
- Cellulose  
 see Cell wall hydrolases in fruit ripening
- Cellulysin  
 ethylene production, 658
- Center of Research in Plant Physiology, 10
- Centroradialis* mutants, 248-49, 251
- Cereals  
 see Fructan metabolism in grasses and cereals; Gene Transfer to Plants
- Chalcone synthase, 625, 628, 638-39  
 MRNA, 428
- Chaperonins, 442
- Chara*, 108  
 $H^+$ -cotransports, 114-5
- Chemical signaling  
 see Root signals, regulation growth and development
- Chilling sensitivity, 485
- Chitin, 652
- Chitinase, 24, 45, 635-36, 653-54, 658
- Chitosan, 652  
 necrosis, 658
- Chlamydomonas reinhardtii*, 35-36, 303  
*cab* gene, 284  
 fluorescence quenching, 336  
 heat shock proteins, 601  
 light-harvesting chlorophyll, 289, 296  
 mutants, 320
- Chlorophyll, 427-28, 445-447  
*cab* binding protein, 299, 363-64  
 degradation, 689  
 fluorescence, 292-93, 295  
 lichen synthesis, 565, 568  
 see also Chlorophyll fluorescence and photosynthesis  
 light responses, 428  
 light-harvesting  
 see Chloroplast protein phosphorylation
- Chlorophyll fluorescence and photosynthesis, 313-49  
 biophysical basis, emission chloroplasts, 314-25  
 emission origin, 321-23  
 emission room temperature, 323  
 emission spectra, low temperatures, 323-24  
 fluorescence reaction, deactivation excited chlorophyll, 314-17  
 lifetimes, 317-21  
 PS II and PS I, 323-25  
 variable fluorescence, low temperatures, 324-25
- conclusions, 341-42  
 induction and PS II heterogeneity, 325-29  
 DCMU, 327-29  
 F<sub>i</sub> level and inactive PSII, 326-27  
 induction high light, 327  
 transient from F<sub>0</sub> to F<sub>4</sub>, 325-26  
 quenching, 329-41  
 components resolution, 330-31  
 energy-dependent mechanism, 331-34  
 further mechanisms, 338  
 magnesium effect, 338  
 oxidized plastiquinone, 338  
 pigment radicals, 338  
 photoinhibition reversal, 336-37

- photoinhibitory, 334-37  
 photoinhibitory hypotheses, 335-36  
 physiological aspects, 338  
**Chloroplast**  
 envelope  
   phosphoproteins, 282, 302-3  
   see also Chloroplast envelope, metabolite translocators  
 fluorescence  
   *Trebouxia*, 566  
   see also Chlorophyll fluorescence and photosynthesis  
 lipids  
   see Glycerolipid synthesis  
 protein phosphorylation  
   see Chloroplast protein phosphorylation; Heat shock proteins  
 ribosomes, 282  
 Chloroplast chaperonin 60, 591-92  
 Chloroplast envelope, metabolite translocators, 129-44  
   ATP/ADP transport, 139-40  
   concluding remarks, 140-41  
   dicarboxylate transport, 136-38  
   introduction, 129-30  
   monocarboxylates, transport, 138-41  
   glycolate/glycerate translocator, 138-39  
   pyruvate translocator, 139  
   other compounds, 140  
   phosphate translocator, 130-36  
   C<sub>3</sub> plants, 130-32  
   C<sub>4</sub> and CAM plants, 132-133  
   phosphate translocator protein properties, 134-36  
   root plastids, 133-34  
 Chloroplast protein phosphorylation, 281-311  
   concluding remarks, 303-4  
   introduction, 281  
   stromal and envelope phosphoproteins, 300-3  
   envelope phosphoproteins, 302-3  
   interenvelope, 303  
   outer envelope, 302  
   pyruvate, orthophosphate dikinase, 300-1  
   ribosomal proteins, 301  
   rubisco, 301  
   stromal phosphoproteins, 300-1  
   thylakoid phosphoproteins, 281-87  
   LCH II, 281-285  
   PSII core proteins, 285-87  
   thylakoid protein kinases, 287-291  
   inhibitor studies, 288  
   more than one, 288-90  
   purification, 291  
   redox control, 287-88  
   redox control, differential, 288-90  
   substrate specificity, 290  
   thylakoid protein phosphatase, 291-92  
   thylakoid protein phosphorylation, 292-300  
   analogs, 298-300  
   cyanobacteria, 298-99  
   cyclic linear flow balance, 296-97  
   lateral heterogeneity, 294-295  
   LHC II, 292-97  
   LHC II migrates, 297  
   LHC II mobility, 294-95  
   phosphorylation changes, 293-94  
   Prochlorophyceae, 299-300  
   PS II, 298  
   red algae, 299  
   state transitions, 295-96  
 Chloroplast ribosomes, 282  
 Choline, 481  
 Choline kinase, 481  
 Choline phosphotransferase, 492  
 Chromatin, 520  
 Chromatofocusing  
   lipoxygenase, 149  
 Chromosome walking, 469, 478, 540-41, 695  
 B-Chromosomes, 192  
 Chymotrypsin inhibitors, 27  
 Ciferri, 6  
 Circadian rhythms, 429  
   light-harvesting chlorophyll, 295  
 Circadian rhythms and phytochrome, 351-371  
   circadian rhythms, 352-58  
   biochemical models, 254-55  
   coupling to rhythms, 355-56  
   endogenous oscillator, 353-55  
   entrainment, 356-57  
   light responses, 356-58  
   mathematical models, 353-54  
   oscillators, single or multiple, 355  
   introduction, 351-52  
   phytochrome, 358-661  
   light, continuous, 357-58  
   light, direct effects, 358  
   molecular species, 358-59  
   responses, 358-61  
   phytochrome interaction with circadian rhythms, 361-65  
   ion movement, 361-63  
   metabolic rhythms, 363-64  
   photoperiodism, 364-65  
   summary, 365-66  
*cis,cis*-1,4-pentadiene system, 146, 148, 153  
 Citrate, 382  
 Citric acid cycle, 472  
*Cladosporium fulvum*  
   wound response lipoxygenase, 177  
 Clathrin, 36  
 Cleland, Bob, 16  
*Coccomyxa*  
   Peltigeraceae-Coccomyxa symbiosis  
   see Lichen symbiosis  
*Codeum fragile*  
   chloroplast transport, 134  
 Cold acclimation  
   heat shock proteins, 585-86  
   see also Stress responses  
 Collaboration in the sciences  
   see Plant physiologist Erasmo Marré  
*Collema flaccidum*, 562  
*Colletotrichum gloeosporioides*  
   lipoxygenase activity, 177  
*Commelina*  
   apoplastic K<sup>+</sup> activity, 112-3  
 Comparative light microscopy  
   lichens, 559  
 Concanavalin A, 33  
 Cori, Carl, 9  
 Corn  
   lipoxygenase, 171  
   roots  
   H<sup>+</sup>-cotransports, 115  
   hexose uptake, 108  
   ion adsorption, 109-10  
   sperm cells, mRNA, 200  
   see also *Zea mays*  
*Crambe abyssinica*, 228  
 Crambin, see Thionins  
 Crassulacean acid metabolism plants  
   chloroplast envelope translocators, 132-33  
 Crucifers  
   see *Brassica* self-incompatibility genes  
 Cyanobacteria, 147, 180, 478  
   thylakoid protein phosphorylation, 298-99  
*Cycloidea*, 271-72, 274-75  
 Cycloheximide, 354, 446

- Cysteines, 165-66  
 nodulins, 518  
 residues, 404, 406  
 thionins, 230
- Cytochrome *b/f* complex  
 inhibitors, 288-89
- Cytokinin, 174  
 negative root signals, 67-68  
 pectic fragments, 659  
 senescence, 175  
 see also Hormone molecular genetics
- Cytoskeleton  
*Rhizobium*, 510-11
- Cx-cellulose  
 see Cell wall hydrolases in fruit ripening
- D
- Dactylis glomerata*  
 FEH, 92
- D'Amato, Francesco, 6
- Darkness  
 circadian rhythms, 357
- Darwin, Charles, 270
- Datura*, 399
- Decay  
 fluorescence, 317-18, 320-21  
*Def* gene, 256-57, 260-63, 266
- Defense  
 see Oligosaccharide signals; resistance
- Degradation  
 fructan, 88-94  
 mitochondria  
 lipoxigenase, 172  
 pectin  
 see Cell wall hydrolases in fruit ripening  
 ubiquitin  
 see Heat shock proteins  
 see also Senescence
- Delila* gene, 264
- 1-Deoxymannojirimycin, 38
- Det* mutants, 451
- Diacylglycerol, 448  
 see also Glycerolipid synthesis
- 2,5-dibromo-3-methyl-6-isopropyl-*p*-benzoquinone, 291
- light-harvesting chlorophyll, 289  
 plastoquinone pool, 287-88
- Dicarboxylate transport, 136-38  
*C<sub>4</sub>*-dicarboxylic acids, 384
- Dichloro-methyl-urea  
 photosynthesis, 353  
 protein phosphorylation, 287-88, 291
- 3-(3, 4'-dichlorophenyl)-1,1-dimethylurea  
 chlorophyll fluorescence, 327-30
- Differentiation  
 organ, 676  
 see also Floral organ differentiation
- Diffusion barriers  
 apoplast, 107-8
- Digalactosyldiacylglycerol  
 see Glycerolipid synthesis
- Digitalis purpurea*  
*heptandra* mutant, 255  
 peloria, 274
- Digitaria sanguinalis*  
 pyruvate translocator, 139
- Diphtheria toxin, 415-16, 641
- Disulfide bonds  
 secretory system proteins, 29
- DNA  
 binding, 435-36  
 heat shock proteins, 583, 589  
 lipoxigenase, 158  
 male gamete, 189  
 self-incompatibility genes  
 see *Brassica* self-incompatibility genes  
 selfish, 602  
 sperm transmission, 192  
 synthesis  
 puorothionin inhibition, 233  
 tapetal cells, 400
- cDNA, 27, 45, 434, 657  
 ACC oxidase, 546  
*ag*, 256  
 chloroplast phosphate translocator, 135  
 Cx-cellulose, 688  
*def*, 256, 263  
 glycerolipid synthesis, 469, 474, 484  
 heat shock proteins, 589, 592, 596  
 lipoxigenase, 156-59, 168  
 phytochrome, 359  
 phytohemagglutinin, 31  
 polygalacturonase, 685-86  
 self-incompatibility genes, 399, 411  
 sucrose synthase, 516  
 thionins, 235-6  
 tomato binding proteins, 29  
 viscotoxins, 230  
 see also Floral organ differentiation; Gene transfer to plants
- t-DNA, 541-42  
 insertion mutagenesis, 256  
 Dolcher, Tullio, 12
- Donnan free space, 105-6, 114, 118
- Donnan model, 104-6  
 Donnan potential, 110, 115
- Drought effects  
 gene expression in rice, 66  
 growth, 65  
 lichen synthesis, 564-65, 572  
 stomatal conductance, 64  
 see also Root signals regulation growth and development
- Drosophila*  
 circadian rhythms, 358  
 homeotic genes, 243, 256, 258, 261-62, 267-68
- Dunaliella salina*, 284
- E
- Eadie-Hofstee plots, 107-8
- Edman degradation, 283, 286
- Electron paramagnetic resonance spectroscopy  
 lipoxigenase, 152-53
- Electron transport, 293, 341
- circadian rhythm models, 354  
 inhibitors, 292  
 metal ion carriers, 518-19  
 plastoquinone pool, 288  
 Photosystem II, 315-16
- Electroporesis, 625  
 gene transfer, 221
- Electroporation  
 gene transfer, 213, 217, 220
- Electrostatic interactions  
 apoplast, 109-10, 114
- Eliot, T.S., 1-2
- ELISAs  
 lipoxigenase, 148, 156, 178
- Elliptochloris*, 563
- Embryo, 190-92  
 abscisic acid, 534  
 DNA incubation, 217-18  
 heat sensitivity, 609
- Emission  
 fluorescence  
 see Chlorophyll fluorescence and photosynthesis
- Endogenous oscillator  
 see Circadian rhythms and phytochrome
- Endoplasmic reticulum  
 endoxylanase, 658-59  
 glycerolipid synthesis, 471  
 oilseeds, 493-95, 497  
 see also Heat shock proteins; Secretory system protein sorting
- Endopolygalacturonase, 681-83
- Enod2* genes, 512-513, 518
- Entrainment  
 see Circadian rhythms and phytochrome
- Envelope  
 phosphoproteins, 302-3

- see also Chloroplast envelope, metabolite translocators
- Environmental rhythms**  
see Circadian rhythms and phytochrome
- Environmental stress**  
see Stress responses
- Enzymes**  
apoplast, 116-7  
fructan  
grasses and cereals, 88-94  
sperm cell, 197  
see also Lipoxigenase: structure and function
- Epidermal strip bioassay**, 64
- Epidermis**  
regulation leaf growth, 63
- Erythritol**, 558
- Erwinia*, 630
- Erwinia carotovora*, 654, 656
- Erysiphe cichoracearum*  
lipoxigenase wound response, 177
- Escherichia coli*, 585, 589, 590, 592
- Ethylene**  
fruit ripening, 676, 681, 690, 692, 694  
jasmonic acid, 174  
lipoxigenase, 167-68  
synthesis  
see Oligosaccharide signals  
see also Hormone molecular genetics
- Etiolated seedlings**  
photobiology  
see Molecular photophysiology
- Euphorbia dulcis*  
sperm cells, 191
- Evans blue**, 197
- Exciton transfer**  
fluorescence lifetimes, 317-21, 328
- Exopolysaccharuronase**, 682
- Expressed meiotic prophase repeat**, 596
- Extensins**, 30, 518
- Extension zone**  
fructan content, 85
- F**
- Fad mutants**  
see Glycerolipid synthesis
- Fatty acids**  
Sporopollenins, 563  
see also Glycerolipid synthesis: Lipoxigenase: structure and function
- Fed-1*, 431, 439
- Ferredoxin*, 474, 515
- Ferroni*, Arnaldo, 15
- Fertilization**  
see Sperm cells flowering plants
- Fibrillar cellulose**, 687
- Field studies**  
heat shock proteins, 607-8
- Fixed charges**  
apoplast, 108-9, 114
- Flavone-3-hydroxylase**, 543
- Flavones**, 508
- Flavonoids**, 521, 628, 632
- Floral**  
development  
pectic fragments, 659  
see also *Brassica* self-incompatibility genes  
homeotic genes  
see Floral homeotic genes  
induction  
inhibition, 358-59, 365  
light, 360, 365  
photoperiodic, 364  
sperm cells  
see Sperm cells, flowering plants; Floral organ differentiation
- Floral homeotic genes**, 242-279  
concluding remarks, 275  
development, genetic control  
first steps, 247-51  
cell-autonomy, 250  
inflorescence evolution, 250-51  
molecular analysis, 249-50  
phenotypic mutants, 247-49  
experimental systems, 243-47  
*Antirrhinum* and *Arabidopsis* as model systems, 243-44  
wild types, 244-47  
introduction, 242-43  
historical, 242  
plant development, 243  
genetic control differences between organs, 270-75  
peloria, general, 270-72  
peloria, terminal, 272-74  
zygomorphy, evolution, 274-75  
zygomorphy, polar-coordinate model, 272  
whorl identity, genetic control, 251-66  
floral organs, evolution, 263-66  
gene action timing, 260-62  
gene targets, 262-63  
models, 254-55  
molecular analysis, 256-57  
phenotypic mutants, 251-54  
regulation, 257-60  
whorl number, genetic control, 266-70
- mutants, 266-68  
organ number evolution, 268-70
- Floral organ differentiation**, 621-49  
concluding remarks, 646  
floral-predominant gene expression regulation, 638-46  
models, 643-46  
pigment synthesis genes, 638-40  
pistil genes, 641-43  
stamen genes, 640-41  
floral-predominant gene identified, 628-36  
carpel-predominant genes, 634-35  
pathogenesis-related genes, 635-36  
petal-predominant genes, 628  
stamen-predominant genes, 628-32  
stamen-predominant genes, conclusions, 633-34  
introduction, 622-25  
differentiation, 624-25  
lateral initiation, 623  
lateral organ initiation, 623-24  
organ-predominant genes, clone isolation, 625-28  
nucleic acid methods, 626-28  
protein-related methods, 625-26  
tissue-predominance of genes, 636-38
- Floricaula* mutant, 247-51, 255, 257-62, 264, 267
- Flowering plants**  
see Floral
- Fluence-response**, 361, 428-30, 450
- Fluorescein diacetate**, 197
- Fluorescence**  
see Chlorophyll fluorescence and photosynthesis
- Folding**  
protein, 586, 590-91  
see also Secretory system protein sorting
- Foliose Parmeliaceae**  
see Lichen symbiosis
- Forti**, Giorgio, 10-12
- Free radicals**, 175-76
- Fructan exo-hydrolase**, 89, 92-93
- Fructan metabolism in grasses and cereals**, 77-101  
biosynthesis and degradation, 88-94

- enzymic mechanism proposed, 88-99  
 FEH, 92-93  
 FFT, 90-91  
 grass and cereal enzymes, 89-92  
 grass enzymology, 93-94  
 SST, 89-90  
 carbon metabolism regulation, 94-96  
 sink tissues, 95-96  
 source leaves, 94-95  
 concluding remarks, 96-97  
 experimental advantages, 96-97  
 selective advantages, 96  
 Gramineae occurrence, 78-79  
 introduction, 77-78  
 occurrence in Gramineae, 78-79  
 physiology of accumulation in Gramineae, 83-88  
 accumulation in growth zones, 85  
 metabolism in leaves, 86-88  
 seasonal accumulation, 83-84  
 storage in reproductive systems, 84-85  
 structures in grasses and cereals, 79-83  
 Fructan-fructan fructosyl transferase, 88-93  
 Fruit ripening  
 ethylene synthesis, 662  
 see also Cell wall hydrolases in fruit ripening  
 Fumarate, 382  
 Fungal  
 elicitors, 668  
 glucan-receptors, 663-65  
 Fungi  
 see Lichen symbiosis  
*Fusarium oxysporum*, 654-55  
*Fusicoccin*, 15  
 G  
 Galactomannans, 679  
 Galactose, 68-81  
 Galactosidase, 688  
 Galactosyl transferase, 475  
 Gametes, 35-36, 250  
 see also Sperm cells, flowering plants  
 Gametophyte, 628  
 see also *Brassica* self-incompatibility genes  
 Gas exchange, 668  
 Gel filtration chromatography, 681  
 hemicellulose, 679  
 Gene expression  
 floral  
 see Floral homeotic genes; Floral organ differentiation  
 nodulin  
 see Nodulin gene regulation  
 polygalacturonase  
 see Cell wall hydrolases in fruit ripening  
 see also Heat shock proteins; Hormone molecular genetics; Molecular photophysiology; Oligosaccharide signals  
 Genes  
 pathogenesis-related, 635-36, 645  
 tagging, 469, 478  
 transfer, 43  
 see also Gene transfer to plants  
 see also Gene expression  
 Gene transfer to plants, 205-225  
 approaches, 210-221  
*Agrobacterium*-mediated gene transfer, 210-211  
 Agroinfection, 211-12  
 biolistics or particle gun, 214-15  
 electrophoresis, 200  
 electroporation, 220  
 DNA incubation, dry seeds and embryos, 217-18  
 DNA incubation, turgescence tissue or cells, 218  
 free passage across cell walls, 216-17  
 liposome fusion, 220  
 liposome injection, 221  
 macroinjection, 219-20  
 microinjection, zygotic, microspore-derived proembryos, 215-16  
 microlaser, 221  
 pollen transformation, 218-19  
 pollen tube pathway, 219  
 protoplasts and direct transfer, 23-14  
 viral vectors, 212-14  
 basic considerations, 207-10  
 integrative transformation proof, 207-8  
 protocols, biology, 208-10  
 introduction, 206  
 summary, 221-222  
 Genetic ablation, 415-16  
*Gerbera*  
 sperm cells, 197-98  
*Gerbera jamesonii*  
 sperm cells, 191, 197  
 collection, 194  
 isolation, 196  
 Gibberellic acid, 171  
*Gladiolus gandavensis*  
 sperm cells, 191  
 collection, 194  
 isolation, 196  
 $\gamma$ -Gliadin, 25, 30  
 Glucinin, 30  
 $\beta$ -1,3-Glucan callose, 398  
 $\beta$ -Glucanase, 24, 45, 635-36, 653-54  
 $\beta$ -Glucans, 677-78  
 viral resistance  
 see Oligosaccharide signals  
 Glucmannans, 679  
 Glucose  
 terminal residue removal, 28-29  
 Glucose-6-phosphate  
 chloroplast transport, 137  
 oxidative metabolism  
 auxin action and growth regulation, 11  
 Glucose regulated protein, 588  
 $\beta$ -Glucosides, 665  
 $\beta$ -Glucuronidase, 26, 35, 412  
 Glutamate synthetase, 514-15  
 Glutamine synthetase, 137, 514-15  
 Glycans, 406  
 high-mannose, 31-32, 37-41  
 Asparagine linked, 37  
 attachments Asparagine residues, 28-29  
 N-linked, 37  
 protein folding, 33-34  
 Glyceraldehyde-3-phosphate dehydrogenase, 606  
 Glycerate  
 stroma pH, 138  
 Glycerolipid synthesis: biochemistry and regulation, 467-84  
 concluding remarks, 498  
 historical perspective, 469-70  
 introduction, 468-69  
 lipid metabolism is highly regulated, 484-90  
 acyl flux, 486-89  
 acyltransferases regulate lipid acyl composition, 484-90  
 fatty acid chain length, 489  
 lipid desaturation, 485-86  
 membrane amount regulation, 489-90  
 seed lipid synthesis, 490-97  
 oilbodies, 492-93  
 phosphatidylcholine, 493-95  
 triacylglycerol synthesis, 491-92



- uncommon fatty acids, 495-96
- uncommon fatty acids, targeting to triacylglycerols, 496-97
- two pathways in leaves, 470-71
- chloroplast desaturases 476-79
- chloroplastid lipid synthesis, 482-84
- desaturation of stearol-ACP, 474-75
- eukaryotic pathway, 479-84
- fatty acid synthesis, 471-73
- fatty acid synthesis, regulation, 573-74
- overview, 470-71
- phospholipid synthesis, 479-82
- prokaryotic pathway, 475-76
- Glycine max*
  - see Lipoxigenase: structure and function; Soybean
- Glycolate/glycerate translocator
- chloroplast envelope, 138-39
- Glycolysis
  - malate, 381-82
- Glycosidases, 688
- Glycosylation, 30, 38, 404, 406
- tunicamycin inhibition, 29
- Goethe, J.W. v.
  - homeosis, 242
- Gola, Giuseppe, 6
- Golgi complex
  - see Secretory system protein sorting
- Gonyaulax polyhedra*
  - bioluminescence period, 357
  - cycloheximide, 354
  - endogenous oscillator, 353, 355
  - luciferase, 356
- Goodman, Bob, 9
- Gouy-Chapman model, 105
- Gramineae
  - gene transfer, 210-11, 213-14
  - thionins, 228
  - see Fructan metabolism in grasses and cereals
- Grana
  - light-harvesting chlorophyll, 297
- Graniti, Antonio, 15
- Gravitropism
  - phytohormones, 534
- Growth acid
  - apoplastic pH, 117-9
- apical
  - Rhizobium*, 510-11
- elongation rate
  - lipoxigenase, 171
- heat shock proteins, 608-9
- hormones
  - see Hormone molecular genetics
- inhibition
  - jasmonic acid, 174
- light
  - see Molecular photophysiology
- phytohormone action
  - gravitropic, 534
  - lateral, 544-45
  - root, 545
  - vascular, 545
- regulation
  - apoplast see Apoplast, pH and ionic conditions
  - auxin, 11, 14
  - ascorbic acid, 11
  - fusicoccin, 15
  - leaf water potential, 59
  - lipoxigenase, 168-72
  - nucleic acid, 14
  - nutrients, 61-62
  - protein phosphorylation, 282
  - respiratory metabolism, 14
  - transport physiology, 15
  - see also Oligosaccharide signals; Root signals, regulation growth and development
- stimulation, 14
- zones
  - fructan metabolism, 85
- GUS genes, 217, 638, 639-42
- H
  - H<sup>+</sup>-ATPase, 27, 39, 363, 669
  - Hackett, David, 10
  - HCO<sub>3</sub><sup>-</sup>
    - apoplast, 108, 114-16
  - HDEL, 31-32
  - Heat shock proteins, 579-620
    - definition, 581-82
    - growth and development, 607-11
      - expression during development, 608-09
      - expression in the natural environment, 607-08
      - thermotolerance, 609-11
  - HSP60, 590-92
    - chloroplast chaperonin 60, 591-92
    - mitochondrial, 590-91
  - HSP70, 582-89
    - cytoplasmic genes and proteins, 583-86
    - cytoplasmic functions, 586-88
    - diversity, 582-83
    - endoplasmic reticulum, 588
    - mitochondrial and chloroplast, 588-89
    - introduction, 580
    - LMW HSPs, 604-07
      - endomembrane, 601
      - gene superfamily, 593-97
      - function, 602-04
      - plastid, 599-601
      - structure, 597-99
    - other HSPs, 604-07
      - additional heat-regulated proteins, 606-07
      - HSP90 and HSP110, 604-05
      - ubiquitin summary, 611-12
  - Helleborus niger*
    - floral organization, 268-69
  - Helianthus tuberosus*
    - fructan, 79-82, 88-90, 95
    - enzymes, 92-93
  - Heparin, 434
  - Heptagluconide elicitor, 664-65
  - Heptasaccharide
    - see Cell wall hydrolases in fruit ripening
  - Heptandra mutans*, 255
  - Herbicides
    - Photosystem II, 298
    - SAN 9785, 475
  - Heterophyllus species
    - role
      - ABA leaf development, 66
  - Heterospermy, 191
  - Hexose
    - fructan synthesis, 95
  - Higinbotham, Noe, 16
  - High-performance liquid chromatography
    - fructan, 80-81
    - lipoxigenase, 149, 155
  - High performance size-exclusion chromatography
    - cell wall pectins, 680
  - Histidine, 164-66
  - Holoenzyme, 301
  - Homeotic genes
    - see Floral homeotic genes
  - Homologies
    - heat shock proteins, 603, 611
    - nodulin, 518-19
  - Hordeum vulgare*, 88
    - chlorophyll fluorescence, 334
    - leaf thionins, 229, 233-35
    - senescence, jasmonic acid, 174
    - sperm cells, 191-3, 195
  - Hordothionin
    - see Thionin

- Hormone molecular genetics, 529-550  
 conclusions, 546-47  
 genes and transgenic plants, 541-46  
   accoxidase, 546  
   agrobacterium, 541-42  
   apical dominance, 544-45  
   auxin and cytokinin, 544  
   auxin binding proteins, 543  
   ethylene biosynthesis, 543  
   genes controlling synthesis and metabolism, 541-44  
   IAA-lysine synthetase, 543  
   isopentenyl transferase, 542  
   other effects, 545-46  
   root growth, 545  
   vascular growth, 545  
   what we have learned from transgenic plants, 544-46  
 genetic analysis, 531-541  
   auxin, 538-40  
   ethylene, 536-38  
   gravitropism, 534  
   hormone biosynthesis, 531-33  
   mechanisms, 536-40  
   molecular cloning of mutant genes, 540-41  
   physiological roles, 533-35  
   seed development, 533-34  
   stature, 533-34  
   stress responses, 535  
   introduction, 529-31  
 Hydrogen ions  
   auxin regulation, 660  
   apoplast, 105, 108, 110-14, 117-8, 120-21  
 Hydrogen peroxide  
   oligosaccharide signals, 667-68  
 Hydrolases  
   see Cell wall hydrolases in fruit ripening  
 Hydropathy plots, 161-64  
 Hydroperoxide, 146, 152, 158, 165, 167, 172-73, 176  
 13-Hydroperoxy linoleic acid, 149  
 Hypersensitivity  
   oligosaccharide signals, 657-58  
*Hyoscyamus muticus*, 532  
*Hyoscyamus niger*  
   sperm cells, 200  
 I  
 Immunological characterization  
   sperm cells, 198  
*Impatiens*  
   sperm cells, 196  
*Impatiens balsamina*  
   floral development  
     effect light, 261  
 Indoleacetic acid, 534, 538, 540-42  
   apoplast, 117-9  
   see also Hormone molecular genetics  
 Indoleacetic acid-lysine synthetase, 543  
 Infection  
   nodule  
     see Nodulin gene regulation  
 Inflorescence meristem  
   see Floral homeotic genes  
 Inheritance  
   cytoplasmic, 193  
 Inhibition technique  
   lichen, 557  
 Inositol, phosphatidyl, 363, 448-49  
 Inoculation  
   bacterial, 512  
 Invertase, 33, 41-42  
 Ion  
   fluxes  
     oligosaccharide signals, 668-69  
     transport  
       see Electron transport  
 Ionic condition  
   apoplast  
     see Apoplast, pH and ionic conditions  
 Iron environment  
   lipoxygenase, 152-53, 155, 164-65, 169  
 Isoketose  
   fructan  
     enzymes, 91-92  
     grasses, 81  
 Isopentenyl transferase, 542  
 Isozymes  
   lipoxygenase, 151, 154, 165-66, 169  
 Italian Society of Plant Physiology  
   see Plant physiologist Erasmo Marré  
 J  
 Jasmonic acid, 173-74, 179  
   wound induction, 668  
 K  
 KDEL, 31-32, 39  
 1-Ketose  
   fructan  
     enzymes, 90-91  
     grasses, 80-83, 86, 88  
 6-Ketose  
   fructan  
     enzymes, 90  
     grasses, 81-83  
 Kinase  
   protein, 408, 449  
     heat shock induction, 606  
   see also Chloroplast protein phosphorylation  
 Kinetin, 175, 659  
 L  
 Lasers  
   see Microlaser  
 Leaves  
   abscisic acid synthesis, 63  
   conductance, 59  
   fructan  
     accumulation, 83-84, 86-87, 88  
     enzymes, 90-91  
     metabolism, 86  
   growth  
     abscisic acid, 64-66  
     lipid synthesis  
       see Glycerolipid synthesis  
     movements, 113, 354  
     rhythm, 357, 661-62  
     oscillators, 355  
   nitrogen  
     role enzyme activity, 62  
     pH<sub>ex</sub>, 116  
     sheaths  
       fructan, 83-84  
     thionins  
       see Thionins  
     water availability indicator, 61  
     water potential, 56, 59  
     water status and soil drying, 56-57  
     wrinkling, 545-46  
 Lectins, 655  
 Leghemoglobin, 378, 380-81, 514, 519  
 Legume-Rhizobium synthesis  
   see Nodulin gene regulation  
*Lemna gibba*  
   potassium ion uptake rhythm, 362  
 Lichen symbiosis, 553-78  
   carbohydrate transfer, 557-59  
   CO<sub>2</sub> uptake and photosynthesis, 570-71  
   concluding remarks, 574  
   introduction, 553-57  
   peculiarities, 554-57  
   mycobiont-photobiont interface, 559-70

- foliose *Parmeliaceae* with  
*Trebouxia* photobionts,  
 565-70  
*Peltigera-Nostoc* symbiosis,  
 560-62  
*Peltigeraceae-Coccomyxa*  
 symbiosis, 562-65  
 polyol metabolism and water  
 relations, 571-74  
 Lifetime analysis  
 see Chlorophyll fluorescence  
 and photosynthesis  
 Light  
 chlorophyll fluorescence  
 see Chlorophyll fluores-  
 cence and photosynthe-  
 sis  
 fatty acid synthesis, 474  
 floral development, 261  
 lipoygenase activity,  
 171  
 phytochrome  
 far-red, 358-60  
 red, 358-60  
 see also Molecular  
 photophysiology  
 responses  
 see Molecular photophysiol-  
 ogy  
 Light-dark cycles  
 see Circadian rhythms and  
 phytochrome  
 Light-harvesting chlorophyll,  
 442-445  
 see also Chloroplast protein  
 phosphorylation  
 Lignin, 653  
 synthesis, 654  
*Lilium longiflorum*  
 sperm cells, 196  
*Linaria vulgaris*  
 peloria, 270-71  
 Linnaeus, C., 270  
 Linoleic acid, 146, 148-49,  
 153, 167  
 Linseed oil  
 see oilseeds  
 Lipid metabolism  
 see Glycerolipid synthesis  
 Lipid peroxidation  
 see Oligosaccharide signals  
 Liposomes, 38-39  
 gene transfer, 220-221  
 Lipoygenase: structure and  
 function, 145-88  
 biochemical and molecular  
 properties, 147-66  
 general, 147-51  
 reaction mechanism, 151-  
 55  
 structure, 155-66  
 concluding remarks, 179-80  
 introduction, 145-47  
 physiological role, 166-79  
 growth and development,  
 168-72  
 regulatory molecules, 172-  
 74  
 senescence, 174-76  
 wound, other stress re-  
 sponses, 176-79  
*Lolium perenne*  
 sperm cells, 194-95  
*Lolium temulentum*  
 fructan, 81, 83, 85-86, 88,  
 94  
 fructan enzymes, 90-92  
*Lotus corniculatus*  
 $\beta$ -glucuronidase, 514-15  
 nodulin gene expression, 519  
 Low molecular weight  
 heat shock proteins  
 see Heat shock proteins  
 Low-temperature scanning elec-  
 tron microscopy, 568, 572  
 Luciferase, 356  
 Luciferin binding protein, 356  
 Luminal, 668  
 Luminescence rhythm  
 puromycin inhibition, 353  
 Lycopene accumulation, 684,  
 693-94  
*Lycopodium*  
 sporopollenin, 566  
 Lys-273, 136  
 Lysin, 35  
 M  
 Macroinjection  
 gene transfer, 219  
*Magnaporthe grisea*  
 heat-stable killing activity,  
 657-58  
 Magnesium  
 fluorescence quenching, 338  
 light-harvesting chlorophyll,  
 297  
 Maize  
 Chloroplast envelope trans-  
 locator, 134-35, 138  
 streak virus  
 agroinfection, 212  
 Malate  
 dehydrogenase, 382  
 oxygen-limited carbon  
 metabolism, 381-83, 385  
 transport, 137  
 Malonate, 382-83, 385  
*Manduca sexta*, 232  
 Marrè, Erasmo  
 see Plant physiologist Erasmo  
 Marrè  
 Mass spectrometry  
 phosphorylation sites, 286  
 Melatonin, 355  
 Membranes  
 circadian rhythm models, 354  
 degradation  
 lipoygenase, 174-76  
 light signals, 447-49  
 lipids  
 see Glycerolipid synthesis  
 mitochondrial, 297  
 peribacteroid  
 nodulins, 514, 516-17  
 permeability  
 role thionins, 232-33  
 plasma, 665  
 protein kinase, 665  
 secretory system proteins, 27  
 sperm cell integrity, 197-98  
 see also Chloroplast envelope,  
 metabolite translocators;  
 apoplast, pH and ionic  
 conditions  
*Mendicago truncatula*, 520  
 Meristem, 636  
 evocation, 623  
 inflorescence  
 see Floral homeotic genes  
 Merola, Aldo, 12  
 Metabolism  
 fructan  
 see Fructan metabolism in  
 grasses and cereals  
 lipid  
 see Glycerolipid synthesis  
 phenylpropanoid, 625  
 polyol  
 lichen synthesis, 571-74  
 regulation, 6-8, 10-11  
 see also Carbon in  $N_2$  fixa-  
 tion: Circadian rhythms  
 and phytochrome  
 Metabolite translocators  
 see Chloroplast envelope,  
 metabolite translocators  
 Metamorpho  
 see Floral homeotic genes  
 Methionine bristle, 600  
 Methylmercuric iodide, 166  
 Microfibril, 677-79  
 Microgametophyte  
 see Sperm cells flowering  
 plants  
 Microinjection  
 gene transfer, 215-16  
 Microlaser  
 ablation, 416  
 gene transfer, 221  
 Mistletoe  
 viscotoxin, 228  
 Mite infestation  
 lipoygenase activity, 178  
 Mitochondria, 190  
 acyl-ACP, 471  
 heat shock proteins, 606  
 pyruvate dehydrogenase, 472

- Molecular photophysiology, 423-466  
 diversity of responses, 429-432  
 competence, 431-32  
 etiolated seedlings, 429-32  
 fluence requirements, 429-431  
 green plants, 433  
 plastid factor, 432  
 introduction, 424-29  
 de-etiolation, 428  
 diurnal and circadian rhythms, 429  
 interactions, 427-28  
 light responses, 428-29  
 other, 427  
 photoreceptors, 424-28  
 phytochrome, 424-27  
 posttranscriptional controls, 437-39  
 discrepancies, 438  
 ferredoxin system, 439  
 technical problems, 439  
 transcription and mRNA abundance, 438-39  
 signal transduction, 445-52  
 biochemical events, 446-50  
 genetic approaches, 450-52  
 membranes and second messengers, 447-49  
 multiple transduction chains, 445-46  
 protein phosphorylation, 449-50  
 protein synthesis, 446-47  
 transcriptional controls, 433-37  
 cis-acting elements, 435-36  
 in vitro experiments, 433-34  
 promoter complexity, 437  
 transcription factors, 436-37  
 transgenic plants, 435-37  
 translational and posttranslational controls, 440-45  
 CAB proteins as model system, 442-45  
 posttranslational control, 442  
 translational control, 440-42  
 Monocarboxylates transport, 138-39  
 Monoclonal antibodies, 655  
 flower-specific antigens, 626  
 peribacteroid membrane, 517  
 Monogalactosyldiacylglycerol see Glycerolipid synthesis  
 Monogalacturonic acid, 668  
 Monroy, Alberta, 15  
 Mössbauer spectroscopy  
 lipoxigenase, 152-53, 164  
 Morphogenesis  
 see Oligosaccharide signals  
 Morpurgo, Giorgio, 14  
 Murmek, Andrew, 8  
 Mustard  
 lipoxigenase, 170-71  
 Mutants  
 floral, 639  
 see also Floral homeotic genes  
 lipid metabolism  
 see Glycerolipid synthesis  
 Mycobiont-photobiont interface  
 see Lichen synthesis  
 Mycorrhizins, 521  
 N  
 NADH, 515  
 NADP, 12, 14  
 NADP reductase, 291  
 NADPH, 299, 427, 478  
 Necrosis, 177  
 oligosaccharide signals, 657-58  
 Neokestose  
 fructan  
 grasses, 80-81, 83, 89  
*Neurospora crassa*  
 amyloplast envelope translocators, 140  
*Nicotiana*, 626  
 leaf thionins, 234  
 lipoxigenase, 158-60, 165  
 wound response, 177  
 seeds  
 endoplasmic reticulum retention signals, 32  
 PHALB protein, 26  
 self-incompatibility systems, 410-12, 416  
 TA29, 641  
 transgenic, 447  
*Nicotiana alata*, 399, 401, 412  
 S-gene, 642-43  
*Nicotiana plumbaginifolia*  
 auxin auxotrophic variants, 532  
 multiple hormone resistance, 539  
*Nicotiana tabacum*  
 genes, 634, 642  
 transfer, 216, 642  
 self-incompatibility genes, 410-12  
 sperm cell collection, 191  
 tobacco mosaic virus, 177  
 Nitrite  
 root plastid reduction, 133  
 Nitrite reductase, 363  
 Nitrogen fixation  
 see Carbon in N<sub>2</sub> fixation;  
 Nodulin gene regulation  
 Nitrogenase, 514-15  
 see also Carbon in N<sub>2</sub> fixation  
 Nodule carbon metabolism  
 nod genes  
 see Nodulin gene regulation  
 see also Carbon in N<sub>2</sub> fixation  
 Nodulin gene regulation, 507-28  
 concluding remarks, 521-22  
 infection and nodule organogenesis, 511-14  
 early nodulin genes induced, 513-14  
 nodulins involved, 512  
 root hair proteins, 511-12  
 introduction, 508  
 late nodulins, 514-518  
 ammonia assimilation enzymes, 514-15  
 aspartate aminotransferase, 516  
 carbon metabolism, 515-16  
 enhanced nodule proteins, 517-18  
 glutamate synthase, 515  
 glutamine synthetase, 514-15  
 nitrogen transporters, synthesis, 516  
 peribacteroid, membrane nodulins, 516-17  
 phosphoenol pyruvate carboxylase, 515  
 sucrose synthase, 516  
 uricase, 516  
 molecular signaling, 508-11  
 rhizobial, 508-10  
 rhizobium, calcium and cytoskeleton, 510-11  
 symbiotic signaling, 508  
 nodulin homologies, gene families, 518-19  
 nodulin gene families, 518-19  
 plant hemoglobins, 519  
 structural nodulins, 518  
 plant genetics, 520-21  
 legume mutants, 520-21  
 regulatory elements for expression, 519-20  
 Norflurazon, 432  
 Northern blotting  
 floral organ development, 624, 634, 629  
 lipoxigenase, 148, 150, 158, 172  
 Nostoc  
*Peltigera-Nostoc* symbiosis  
 see Lichen symbiosis  
 NPTII genes, 217

- Nuclear genes  
light regulated  
see Molecular photophysiology
- Nuclear magnetic resonance spectroscopy  
fructan, 81  
lichen, 573
- Nucleic acid  
flower-specific antigens, 626  
Nutrient deficiency, 62
- O
- Oenothera organensis*, 630
- Oilbodies, 492-93, 496
- Oilseeds, 490-97, 641
- Oligoturonides, 652-54
- Oligosaccharide signals, 652-74  
defense responses, 653-59  
β-Glucans and viral resistance, 655  
hypersensitivity and necrosis, 657-58  
pectic fragments, 653-55  
polygalacturonase inhibitors as regulators, 655-57  
xylanase, 658-59  
introduction, 652-53  
regulators of plant growth, 659-63  
auxin regulation, 660-62  
ethylene synthesis and fruit ripening, 662-63  
morphogenesis, 559-60  
signal transduction, 663-69  
fungal glucan receptors, 663-65  
H<sub>2</sub>O<sub>2</sub> production and lipid peroxidation, 667-68  
in vitro phosphorylation, 666-67  
ion fluxes, 668-69  
pectic fragments, 665-66  
summary, 669
- Oligosaccharides, 510  
fructan  
see Fructan metabolism in grasses and cereals
- Organogenesis  
nodule, 512
- Orzerrigo, Mario, 12
- Oryza sativa*  
gene transfer, 217  
see also Rice
- Oscillator  
see Circadian rhythms and phytochrome
- Osmotic shock  
sperm cell isolation, 193
- ovv* mutants, 267, 272
- Oxaloacetate  
transport, 137-38
- 2-Oxoglutarate, 137
- Oxygen  
diffusion barrier  
see Carbon in N<sub>2</sub> fixation limitation  
see Carbon in N<sub>2</sub> fixation
- Oxygen singlet  
lipoxygenase, 150
- P
- Pachyman, 654
- Paclitaxel, 539
- Panicum miliaceum*  
chloroplast transport, 133, 138  
pyruvate, 139
- Papilla, 234
- Parmeliasulcata*, 559
- Parmeliaceae*  
see Lichen symbiosis
- Parthenocarp, auxin-induced, 8, 9
- Partitioning  
photosynthate system, 376-77
- Patatin, 38, 43
- Pathogenesis-related genes, 635-36, 645
- Pathogenesis-related proteins, 44-45
- Pea  
chloroplast envelope translocators, 130-33, 135-37  
ATP/ADP translocator, 140  
lipoxygenase, 156, 158-59, 160, 162, 170  
root plastids, 134  
pyruvate translocator, 139  
pea seed albumin, 26  
water transport, 119  
see also Carbon in N<sub>2</sub> fixation; Nodulin gene regulation
- pEA, 425-26
- Pectate lyase, 402, 630, 633, 682
- Pectic fragments  
see Oligosaccharide signals
- Pectin  
apoplast, 104, 107, 109, 120  
fruit ripening  
Cell wall hydrolases in fruit ripening  
Pectin lyase, 657, 682  
Pectin methyl esterase, 117  
see also Cell wall hydrolases in fruit ripening
- Peltigera-Nostoc* symbiosis  
see Lichen symbiosis
- Peltigeraceae-Coccomyxa* symbiosis  
see Lichen symbiosis
- Peloria, 270-74
- Percoll density-gradient purification, 168
- Peribacteroid membrane nodulins, 514, 515-16
- Permeability  
apoplast, 107  
chloroplast envelope, 129-30, 138  
glycolate/glycerate, 138  
role  
lipoxygenase, 174-75  
see also Membranes
- Petal-predominant genes, 628
- Petunia hybrida*, 402  
chalcone synthase, 638  
self-incompatibility genes, 412  
sperm cells, 191
- Petunia inflata*, 402
- pH, 138-39, 296  
γ-aminobutyric acid, 384  
apoplast  
see Apoplast, pH and ionic conditions  
fructan enzymes, 93-94  
lipoxygenase, 149, 151  
Photosystem II, 298  
protein kinase, 296  
role  
electron transport, 341  
fluorescence quenching, 331-33, 339-40  
SID caused by soil drying, 68-69
- pH<sub>ex</sub>, 110-111
- phalb*, 26, 35
- PHALB, 26, 35
- Phaseolin, 25-26, 34, 38  
β-phaseolin gene, 34  
gene transfer to tobacco, 43
- Phaseolus*  
apoplast  
fixed charges, 107  
K<sup>+</sup>, 113  
leaf movement, 362-62
- Phaseolus vulgaris*  
phenylalanine ammonia-lyase, 639  
polygalacturonase inhibitors, 656  
senescence  
lipoxygenase, 175  
see also Phytohemagglutinin
- Phenylalanine ammonia-lyase, 639
- Phenylhydrazine  
lipoxygenase, 155
- Phenylpropanoid pathway, 625, 628-32
- Phleum pratense*  
fructan enzymes, 91, 93-94  
pollen, 193

- Phoma exigua*  
wound response, 177
- Phototoxin, 230
- Phosphatase  
see Chloroplast protein phosphorylation
- Phosphate translocator  
chloroplast envelope, 130-36  
physiological functions plastids, 131  
specificity plastids, 132
- Phosphate  
uptake, 110
- Phosphatidic acid  
see Glycerolipid synthesis
- Phosphatidyls, 363  
see also Glycerolipid synthesis
- Phosphoenolpyruvate, 133, 139
- Phosphoenolpyruvate carboxylase, 300, 363, 382-86  
nodule, 515
- Phosphoglycerate, 133-34, 132, 138
- Phospholipid synthesis  
see Glycerolipid synthesis
- Phosphopeptides, 286
- Phosphorylation, 436, 442  
fluorescence quenching, 334  
protein, 414, 449-50, 663, 665-67  
in vivo, 666-67  
see also Chloroplast protein phosphorylation
- Photobionts  
see Lichen symbiosis
- Photochemical energy conversion  
see Chlorophyll fluorescence and photosynthesis
- Photooxidation, 432
- Photoperiods  
nodule activity, 375  
see also Circadian rhythms and phytochrome
- Photophysiology  
see Molecular photophysiology
- Photoreceptor, 352-53, 364  
see also Molecular photophysiology
- Photorespiration, 138, 336  
NH<sub>3</sub> reassimilation, 137
- Photosymbiodemes, 558  
lichen, 559, 568
- Photosynthate, 375-77, 386  
lichen, 559
- Photosynthesis, 12  
carbon limitation  
see Carbon in N<sub>2</sub> fixation  
DCMU inhibition, 353  
rhythms, 356  
see also Chlorophyll fluorescence and photosynthesis;  
Chloroplast envelope, metabolite translocators;  
Molecular photophysiology
- Photosystems, 427  
Photosystem II, 285-87, 298, 445  
heat shock proteins, 604  
lichen symbiosis, 562, 571  
see also Chlorophyll fluorescence and photosynthesis;  
Chloroplast protein phosphorylation
- Phy*, 359
- Phy-A*, 426, 436, 439, 447
- Phyllotaxis, 250
- Phylogenetic relationship  
plants, thionin isolated, 231
- Physcomitrella patens*  
cab gene, 284
- Phytoalexins  
oligosaccharide signals, 662, 664-67, 669
- Phytochrome, 428-29, 433-34, 445-46, 449-50, 623  
see also Circadian rhythms and phytochrome; Molecular photophysiology
- Phytohemagglutinin, 26, 28, 31-33, 37-38, 41-44
- Phytohormones  
see Hormone molecular genetics
- Phytophthora infestans*, 667
- Phytophthora megasperma*, 654  
oligosaccharide signals, 664-65, 668
- Piroxicam, 177
- Pistil  
self-incompatibility genes  
see *Brassica* self-incompatibility genes
- Pisum sativum*  
see *Pea*
- Plant-aphid system, 655  
floral pigments, 632
- Plant physiologist Erasmo Marré, 1-20  
biographical, 2-16  
Academy of Arts and Italian Society of Plant Physiology, 12-14  
early years, 2-3  
Milan, 11-14  
protein synthesis to transport, 14-16  
regulation as central problem, 6-8  
USA experience, 8-10  
War, 3-5
- Way to plant physiology, 5-6  
conclusions, 16-20  
motivations, 17  
plant physiology and the unity of life, 18-20  
political trend towards application, 17-18
- Plant-microbe interactions  
see Carbon in N<sub>2</sub> fixation;  
Nodulin gene regulation
- Plastalemma, 110
- Plasmolysis, 110
- Plastid factor, 432
- Plastids, 190
- Plumbago zeylanica*  
sperm cells, 191-92, 194, 196, 198-99
- Plastoquinone pool  
chlorophyll fluorescence quenching, 316, 322, 325-27, 338  
light-harvesting chlorophyll, 289
- Photosystem II, 285-98  
redox control, 287, 296  
thylakoid kinase
- Pleni* mutants, 266-67, 272
- Pollen  
DNA transfer, 218-19  
heat sensitivity, 609  
tube growth  
see *Brassica* self-incompatibility genes  
see also Floral organ differentiation; Sperm cells  
flowering plants
- Polyacrylamide gel analysis, 512, 515
- Polygalacturonase, 120, 401, 630-31, 633  
fruit ripening  
see Cell wall hydrolases in fruit ripening  
inhibitors  
see Oligosaccharide signals
- Polymerase chain reaction, 627
- Polymers  
cell wall, 105-6  
fructose  
see Fructan metabolism in grasses and cereals
- Polyol metabolism  
lichen symbiosis, 571-74
- Polyuronides, 694  
chelator-soluble, 692, 694  
degradation, 663, 693
- Pontremoli, Sandro, 7
- Pores  
cell wall diffusion, 108
- Posttranscriptional controls, 694  
see also Molecular photophysiology

## 750 SUBJECT INDEX

- Potato tubers  
cytokinins, 546  
wound response  
lipoxygenase, 178
- Potassium ions  
apoplast, 112-114  
circadian rhythm models, 354, 361  
uptake, 362
- Price, Carl, 10
- Prochlorothric hollandica*  
protein phosphorylation, 299
- Prolamines, 25
- 4-Prolylhydroxylase, 30
- Pronase, 667
- Propidium iodide, 197
- Protease inhibitor, 668
- Proteins  
ATP translocator, 140  
floral organ differentiation, 625-26  
folding, 586, 590-91  
see also Secretory system  
protein sorting  
heat shock induction, 606  
kinase, 408, 449, 665  
see also Chloroplast protein  
phosphorylation  
phosphate translocator, 134-36  
phosphorylation, 414, 663, 665-67  
in vivo, 666-67  
photoreception, 449-50  
see also Chloroplast protein  
phosphorylation  
sulfur-rich  
see Thionins  
see also Secretory system  
protein sorting; Storage proteins
- Proteinase inhibitors, 179, 664-65, 6690
- Protochlorophyllide, 427-28, 442-42
- Protochlorophyllide reductase, 428-29
- psbH, 286, 289
- Pseudomonas syringae* pv. *pisi*  
hypersensitive reaction  
role of lipid peroxidation, 176
- Pseudomonas syringae* pv. *savastanoi*  
IAA-lysine synthesis, 343
- Puccinia coronata*  
crown rust, 177
- Pavani, 361
- apoplast, 111-114
- Purothionin  
see Thionins
- Phycobilisomes, 298-99
- Pyridoxal-5-phosphate, 302
- Pyroloquinoline quinone  
lipoxygenase, 155
- Pyricularia pubera*  
thionin, 228, 232-33
- Pyruvate dehydrogenase, 472
- Pyruvate translocator  
chloroplast envelope, 139, 300
- Q
- Quenching  
fluorescence, 327, 329-41
- Quinone  
fluorescence emission, 315-16, 321-22, 324-26  
quenching, 330-38  
reduction, 327-29  
reoxidation kinetics, 326
- R
- RbcS, 425, 427, 433, 435-36, 438, 440, 446, 448
- Red algae  
phycobilisomes, 299
- Redox control  
protein kinases  
cyanobacterial, 299  
thylakoid, 287-88
- Regulation  
see Nodulin gene regulation
- Remotti, Ettore, 3
- Reproductive systems  
fructan storage, 84-85  
see also Sperm cells, flowering plants
- Reproductive-cell engineering, 200
- Resistance  
phytohormones, 535  
thionins, 234-35
- Respiratory activity  
sperm cells, 197
- Restriction fragment length  
polymorphism, 540-41
- Rhamnogalacturonans, 680
- Rhizobia  
legume interaction  
see Nodulin gene regulation  
see also Carbon in N<sub>2</sub> fixation
- Rhizobium meliloti*  
oligosaccharide signals, 660
- Rhododendron*  
sperm cells, 191, 194, 196
- Rhodospirillum rubrum*, 592
- Rhythms  
see Circadian rhythms and phytochrome
- Ribitol, 558, 565, 568, 573
- Ribosomal proteins  
phosphorylation, 301
- Ribulose-1,5-bisphosphate carboxylase, 301, 363, 440, 442, 590  
subunit binding protein, 591-92
- Ricci, Carlo, 7
- Ripening  
fruit  
ethylene synthesis, 662  
see also Cell wall hydrolases in fruit ripening
- RNA, 27, 136, 663  
antisense techniques, 531, 547  
heat shock proteins, 600, 603  
lipoxygenase, 150, 158-59  
polygalacturonase, 683-4  
PsENOD12, 513  
sperm cell, 200  
see also Molecular photophysiology
- mRNA 172, 174, 256, 431, 437
- cab, 432
- CI-2, 27
- fruit ripening, 688
- heat shock proteins, 585, 596, 603, 609
- light induced, 433
- luciferin binding protein, 356
- nitrate reductase
- phytochrome, 359, 424
- thionin, 234
- see also Floral organ differentiation
- Roberts medium, 193
- Root signals, regulation growth and development, 55-76  
chemical and hydraulic signaling, 56-62  
development regulation role for root, 57-59  
root signal regulates development, 59-60  
root water status changes, 60-61  
soil drying and leaf water status, 56-57  
soil mechanical impedance responses, 61-62  
water availability measured, 60-62
- chemical information from roots to shoots, 62-70  
abscisic acid in soil, 70  
abscisic acid in xylem, 64-66  
field studies, 66-67  
fluxes, 69-70  
negative signals, 67-68  
other signals, 68-70  
positive signals, 63-67  
soil drying and ABA synthesis, 63-64



- strong ion differences and pH, 68-69
- conclusions, 70-72
- introduction, 55-56
- Roots**
  - cortexes
    - apoplast, 103, 111
  - fructan accumulation, 83-84
  - gravitropism, 534
  - growth
    - phytohormone action, 545
  - H<sup>+</sup>-cotransports, 116
  - hairs
    - deformation, 660
    - see also Nodulin gene regulation
  - nodules
    - see Carbon in N<sub>2</sub> fixation; Nodulin gene regulation
  - nutrient transport, 115
  - plastids
    - transport, 133-34
  - soil drying and ABA synthesis, 63-64
  - split-root experiments, 57-58, 63
  - tips
    - ABA synthesis, 69
    - water relations, 60
- S**
  - Saccharomyces cerevisiae*
    - heat shock proteins, 583, 586, 590, 602, 605, 610
    - see also Yeast
  - Salt concentration, 104-5
  - Samanea saman*
    - inositol phosphates 362-63
    - leaf movement, 361
  - Scanning electron microscopy
    - sperm cells, 199
  - Scenedesmus*
    - chlorophyll fluorescence, 295, 319
  - SDS gel system
    - lipoxigenase, 150
  - Secale cereale*
    - gene transfer, 219
    - pollen, 200
    - sperm cells, 195, 200
  - Secretory system protein sorting, 21-53
    - carboxyterminal KDEL and HDEL, ER retention signals, 31-32
    - endosomes, 36-38
    - glycan lack or incorrectly folded broken down, 33-34
  - high-mannose glycans converted to complex glycans, 37-38
  - introduction, 22-23
    - movement ER to Golgi to plasma membrane by bulk flow, 34-36
  - signal sequence, secretory pathway entry, 25-27
  - transport competence in ER lumen, 27-31
    - amino acid residue modification, 30
    - disulfide bonds, 29-30
    - glycan attachment to asparagine residues, 28
    - oligomer formation, 30-31
    - polypeptide folding, 29
    - signal sequence, cotranslational removal, 28
    - terminal glycan residues, removal, 28-29
  - transport in secretory system, 23-25
  - vacuolar sorting: mannose-6-phosphate, 38-39
  - vacuolar sorting domains defined, 43-45
    - fusion proteins, 43-44
    - homologous extracellular and vacuolar proteins, 44-45
  - vacuolar sorting domains in yeast, 39-41
  - vacuolar sorting signal in yeast, 41-42
- Seeds**
  - development
    - heat shock proteins, 608
    - phytohormones, 533-34
  - dormancy, 546
  - DNA incubation, 217-18
  - fructan, 84
  - lipid synthesis
    - see Glycerolipid synthesis
  - thionin, 233
- Selenastrum minutum*
  - malate, 382
- Self-incompatibility gene, 23, 634
  - see also Brassica self-incompatibility genes
- Senecio*, 196
- Senescence
  - role lipoxigenase, 174-76
- Shoot water status
  - root signals, 71-72
- Signal sequences
  - secretory pathway, 25-27
- Signals**
  - cell-cell
    - pollen, 414
  - fatty acid synthesis, 489
- fluorescence
  - see Chlorophyll fluorescence and photosynthesis
- oligosaccharide
  - see Oligosaccharide signals
- rhizobial
  - see Nodulin gene regulation
- root
  - see Root signals, regulation growth and development
- transduction
  - light, 445-47, 451
  - phytohormones, 539, 546
- Sink tissue**
  - fructan
    - metabolism regulation, 95-96
    - synthesis, 85
- Size exclusion chromatography
  - fructan, 81, 83
- Soil drying**
  - ABA synthesis in roots, 63-64
  - impedance, 61-62
  - leaf water status, 56-57
  - salt concentrations, 62
  - xylem sap, 63
  - see also Root signals, regulation growth and development
- Soil water status, 62
  - effect leaf conductance, 59
- Solorina*, 564
- Solutes**
  - apoplast, 111-12
- Sorbitol, 558
- Sorting**
  - see Secretory system protein sorting
- Southern blot, 208, 219
  - floral organ differentiation, 630, 634
- Soybean**
  - def* gene, 256
- seeds**
  - see Lipoxigenase: structure and function
  - see also Carbon in N<sub>2</sub> fixation; Nodulin gene regulation
- Sperm cells flowering plants, 189-204
  - conclusions, 200-201
  - developmental context, 190-92
  - dimorphism and preferential fertilization, 191-92
  - structural characterization, 190-91
  - isolation, 192-98
  - quality assessment, 197-98

- technical details and protocols, 193-97  
introduction, 189-90  
physiological characterization, 198-200  
  elemental, 199-200  
  immunological, 198  
  molecular, 200  
  polypeptide/protein, 198-99  
*Spinacia oleracea*  
  sperm cells, 191  
  collection, 194  
  isolation, 196  
Sporamin, 44-45  
Sporopollenin, 562  
Stamens  
  floral development, 265, 272-72  
  see also Floral organ differentiation  
Starch, 377  
  chloroplast biosynthesis, 133  
  fructan accumulation, 84  
Stature  
  phytohormones, 534  
Stearyl-ACP  
  see Glycerolipid synthesis  
Stems  
  elongation, 359, 539  
  fructan accumulation, 83-84  
  growth  
    phytohormones, 534-5  
Stomata  
  opening, 361-62  
  light, 358  
  role  
    ABA in the xylem, 64-66, 68  
    apoplast, 112-13  
    cytokinins, 68  
    soil drying, 62  
Storage protein  
  jasmonic acid, 174  
  lipid metabolism, 493-95  
  seed, 533  
  thionins, 232  
Stress responses  
  environmental  
    fluorescence quenching, 338-40  
    freezing/thawing, 332, 340, 573  
    heat, 332, 573  
    photosystem II efficiency, 317  
    water, 607  
  see also Drought; Heat shock proteins  
  proteins  
    see Heat shock proteins  
  role  
    lipoxygenase, 176-79  
    phytohormones, 534  
Stroma  
  phosphoproteins, 282, 300-301, 303  
Strong ion differences (SID), 69  
Substrate specificity  
  thylakoid protein kinases, 290  
Succinate, 382, 385  
Sucrose  
  fructan  
    accumulation, 78, 83, 85-86  
    FEH, 92  
    metabolism, 78, 94-95  
    sink tissues, 95-96  
    synthesis, 85, 88, 95  
    SST, 90  
  lichen symbiosis, 558, 565  
  metabolism, 78  
  transport  
    ULS, 107-8  
Sucrose synthase, 516  
Sucrose-sucrose fructosyl transferase (SST), 88-90  
Sulfolipids  
  see Glycerolipid synthesis  
Sulforhodamine G, 116  
Sulfur-rich proteins  
  see Thionins  
Superoxide  
  oligosaccharide signals, 667-68  
Symbiotic systems  
  see Carbon in  $N_2$  fixation;  
  Lichen symbiosis; Nodulin gene regulation  
Symmetry  
  floral, 270, 272, 275  
T  
Tapetum, 400, 632-34  
*Taraxacum*  
  sperm cells, 196  
*Taraxacum officinale*  
  fructan enzymes, 93  
Target analysis  
  fluorescence, 318-19  
Target genes  
  whorl identity, 262-63, 274  
Temperature  
  chilling, 485  
  floral development, 262-62  
  fluorescence emission, 323-25  
  lipid desaturation, 480  
  see also Heat shock proteins  
*Tetrahymena*, 590  
Teubner, Fred, 9  
Thalli  
  see Lichen symbiosis  
Thermolysin, 475  
  chloroplasts, 302  
Thermotolerance  
  see Heat shock proteins  
Thimann, Kenneth, 8  
Thin-layer chromatography (TLC)  
  fructans, 79, 81-82  
  *Helianthus tuberosus*, 82  
  *Lolium temulentum*, 83  
Thiol endoprotease, 634  
Thionins, 227-40  
  biological function, 233  
  conclusions, 236-37  
  distribution, 227-32  
  leaf, barley, 233-35  
  questions, 235-36  
  toxicity, 232-33  
Thylakoids  
  chlorophyll fluorescence  
    decay, 320-21  
    heat shock proteins, 601  
    light-harvesting chlorophyll, 443  
    quenching, 331  
  protein phosphorylation  
    see Chloroplast protein phosphorylation  
Tobacco  
  see *Nicotiana*  
Tomato  
  Binding proteins, 29, 583  
  hp, 451  
  mutants  
    ABA-deficient, 532  
    *anantha*, 248  
    *aurea*, 428, 450-51  
    auxin-resistant, 534  
    *nor*, 689  
    *rin*, 663  
  see also Cell wall hydrolases in fruit ripening  
  pistil gene expressions, 399  
  ripening  
    see Cell wall hydrolases in fruit ripening  
Toniz, Sergio, 6, 9, 11, 13  
Toxic gene fusion, 415-16  
Toxins  
  see Thionins  
Transcription, 641, 645  
  heat shock proteins, 612  
  see also Molecular photophysiology  
Transgenic plants  
  polygalacturonase, 685, 690-95  
  see also Gene expression  
Transit peptide, 282, 284  
Translocators  
  see Chloroplast envelope, metabolite translocators  
Translational control  
  see Molecular photophysiology  
Transmission electron microscopy

- lichen, 560, 562  
 Transport  
   chloroplast envelope  
     see Chloroplast envelope,  
       metabolite translocators  
   secretory system  
     see Secretory system pro-  
       tein sorting  
   solutes, 104, 107  
   see also Electron transport  
 Transposon tagging, 628, 695  
 Traumatic acid, 173-79  
 Traumatin, 172-73, 179  
*Trebouxia photobionts*  
   see Lichen symbiosis  
 Trehalose  
   SST activity barley, 90  
 Triacylglycerol  
   see Glycerolipid synthesis  
*Trifolium*  
   leaf movement rhythm, 354  
*Triticum aestivum*  
   sperm cells, 194-195  
 Triose phosphates, 130, 132-33  
 Trypsin, 292  
 Tryptophan, 166  
   monooxygenase, 541-42  
 Tunicamycin, 29, 33-34, 38  
 Tyramine, 664
- U
- Ubiquinol, 168  
 Ubiquitin  
   see Heat shock proteins  
 Unity of life  
   see Plant physiologist Erasmo  
   Marré  
 Unstirred layers  
   apoplast, 107-8, 116, 118  
 Uricase  
   nodule, 516  
 Uronic acid, 104, 120
- V
- Vacuole  
   fructan  
     accumulation, 88, 91  
     metabolism, 91  
     sucrose transport, 95  
   see also Secretory system  
   storage proteins
- Vascular growth  
   phytohormone action, 545  
   veg., 248  
*Verticillium dahliae*, 667  
 Vicilin, 32-33, 43  
 Viral vectors  
   gene transfer, 212-13  
 Viscotoxin  
   see Thionins  
*Viscum album*, 228
- W
- Water  
   availability measured by  
     plants, 60-62  
   root water status changes 60-  
     61, 64  
   soil drying and leaf water sta-  
     tus, 56-57  
   transport  
     cell expansion, 119-20  
 Water free space, 105, 118  
 Water potentials, 57, 119  
 Water relations  
   see Lichen symbiosis  
 Western immunoblots  
   lipoxigenase, 148, 156-57  
 Wheat  
   lipoxigenase  
     growth, 170  
     senescence, 175  
   secretory system proteins, 24-  
     25  
   xylem sap, 65-66  
 Whorl  
   floral  
     see Floral homeotic genes  
 Wound response, 635  
   role  
     jasmonic acid, 668  
     lipoxigenase, 172-74, 176-  
       79  
     phytohormones, 535  
   see also Gene transfer to  
   plants
- X
- Xanthium pennsylvanicum*  
   stomatal opening  
     circadian rhythm, 361  
*Xanthophyll*, 334-35  
   abscisic acid, 532
- Xenopus laevis*  
   secretory system, 25-26, 31-  
     32  
 X-ray crystallography  
   heat shock proteins, 587  
   phaseolin structure, 34  
 Xylanase, 688  
   see also Oligosaccharide sig-  
   nals  
 Xylans, 579  
 Xylem  
   field studies, 67  
   ion imbalance as soil water  
     status indicator, 62  
   stomatal behavior and leaf  
     growth, 64-66  
   tomato cation exchange, 106  
   sap, 111  
     analysis unwatered plants,  
       63-65  
     maize sap, 65-66  
     pH and soil drying, 68-69  
     wheat sap, 65  
   water potentials, 57, 119  
 Xyloglucan, 653, 678-79, 687  
   auxin regulation, 661-62  
 Xyloglucanase, 687  
 Xylose, 678
- Y
- Yeast  
   cation uptake, 109  
   phaseolin, 26  
   secretory system  
     sorting signals, 39-43  
   see also *Saccharomyces cere-*  
   *visiae*  
 Yield  
   nitrogen fixation, 376
- Z
- Zanoni, Giuseppina, 6-8, 11  
*Zea mays*  
   sperm cells, 191-92, 194-95,  
     199-200  
   see also Corn  
 Zeaxanthin  
   fluorescence  
     quenching, 332, 335  
 Zygomorphic flowers, 272-275